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THE FISCAL EQUALIZING EFFECTS OF THE EXISTING AND ALTERNATIVE EDUCATIONAL FINANCE PLANS IN ALBERTA

by

© ANNE LILY JEFFERSON

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ABSTRACT

The purpose of the study was to determine whether the adoption of alternative plans for financing of education within the province of Alberta would have significantly increased the level of fiscal equalization attained under the existing (1975 - 1980) provincial finance plan. The existing plan consists of a basic School Foundation Program Fund with special and compensatory funding in the form of School Grants for specific program and financial needs. The School Foundation payments and the eight major School Grants compensating for differing financial needs of school jurisdictions were utilized in this study. Alternative plans examined were power equalization and percentage equalization.

Data for the study were extracted mainly from the ledger accounts of the School Grants section of the Finance, Statistics and Legislation Branch of the Alberta Department of Education for all 136 operating public and separate school jurisdictions within the province.

The results of the study indicated that there was generally an inverse relationship between the amounts of School Grants payments and the wealth or fiscal ability of the school jurisdiction, as measured by the Gini coefficient, using equalized assessment per eligible pupil as the wealth indicator. This inverse relationship was maintained when the School Foundation Program Fund payments were added to the School Grants payments.

Replacing the existing finance plan with either a power equalizing plan or a percentage equalizing plan tended to strengthen the aforementioned inverse relationship between fiscal ability and provincial funds received. The relationship was strongest with percentage equalization.

To control for the effects of inflation under each of the above three financial plans, allotted provincial funds were adjusted first by a provincial price index and then by means of jurisdiction type indexes. Since the provincial price index deflated the nominal dollars allocated to all school jurisdictions by a constant no change was observed in the degree of fiscal equalization attained. The deflation of the nominal dollars allocated on the basis of the type of jurisdiction only minimally affected the extent to which fiscal equalization was achieved within the province. Where a change in the level of equalization was observed, the change was towards a greater degree of equalization.

In summary, the replacement of the existing provincial funding mechanism for education with either power equalization or percentage equalization would have decreased (but not eliminated) existing inequities across school jurisdictions.

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CHAPTER 1

INTRODUCTION

As reflected in the numerous litigations in the United States during the decade of the seventies (e.g., McInnis, Serrano, Rodriguez, Robinson, and Hobson), the question of equalization of educational opportunity, in particular fiscal equalization, has been an area of major concern for the citizen and consequently for governments in that country. Though Canada has not experienced similar types of litigations, the principles emerging from such court cases appear not to be geographically bound. The now famous Serrano v. Priest case of California is one illustration of the general applicability of a financial principle which was situation specific at the time but has since become a major consideration in the financing of education throughout the United States and Canada.

The suit, Serrano v. Priest, questioned the constitutionality of the manner in which California financed its schools. Subsequently, the case wound its way through the courts for six years (1971 to 1976) at which time the California Supreme Court issued a final ruling. Deciding in favor of the plaintiff, Serrano, the court decreed that each school jurisdiction had the right of equal opportunity for access to the property wealth of the state. In other words, the court decided that "the quality of public education may not be 'a function of the wealth of . . . [a pupil's] parents and neighbors' " (Garms, Guthrie and Pierce, 1978:217). This so-called "principle of fiscal neutrality" is now implicitly or explicitly at the base of most school finance plans throughout Canada and the United States.

The idea that the financing of education should not operate to the disadvantage of those pupils living in economically impoverished school jurisdictions, however, did not originate with the Serrano case. This principle of fiscal neutrality has been operating in large measure since the first enunication of the foundation program concept by George D. Strayer and Robert Murray Haig in 1923. The premise of the foundation program at that time was, and still is, not only equalization of educational opportunity but also equalization of the tax burden to support schools. However, at no time prior to the

Serrano v. Priest trial has the principle of fiscal neutrality been given its present attention within the education arena.

As noted by Garvue (1969), the actual educational finance plan adopted by a government is engrained in the political climate operating at the time. As a result, the combined concern for fiscal equalization and political feasibility has ended in an array of school finance plans. Examples of these plans include: the state of Hawaii and the province of New Brunswick operating "full state funding" plans; British Columbia having no fiscal equalization program beyond the School Foundation Program (i.e., the per pupil grant); Saskatchewan having only recently (1978) moved towards increased equalization funding for its northern area; Rhode Island having incorporated a percentage equalizing grant plan; and Alberta supporting education through a combined foundation grant program and a differential funding grant scheme.

The Alberta Situation

Provincial governments in Alberta have given some consideration to the fiscal capacity of local school jurisdictions since, at least, the early 1900's (Dent, 1956:83). At that time, financial aid was provided to local school jurisdictions on the basis of established rural and town categories. Subsequent years saw minor adjustments to the provincial allocation scheme until the introduction of the School Foundation Program Fund in 1961. The purpose of the 1961 program was "to provide all school districts with sufficient funds to achieve a basic minimum educational program, regardless of the fiscal ability they possessed" (Kulba, 1974:118). As the political climate changed and the government became more aware of the basic inequalities in the capacity of local school jurisdictions to raise revenues, an increasing amount of grant monies was allocated in addition to the already established foundation grant. These additional funds, referred to as differential funding, were distributed through formulae which attempted to (1) equalize on the basis of the fiscal ability of a jurisdiction to raise local revenues and (2) account for the special educational needs of some children. The extent, as far as the number and variety of grants involved, of this support for education by the Alberta Government is illustrated in Figure 1.1.

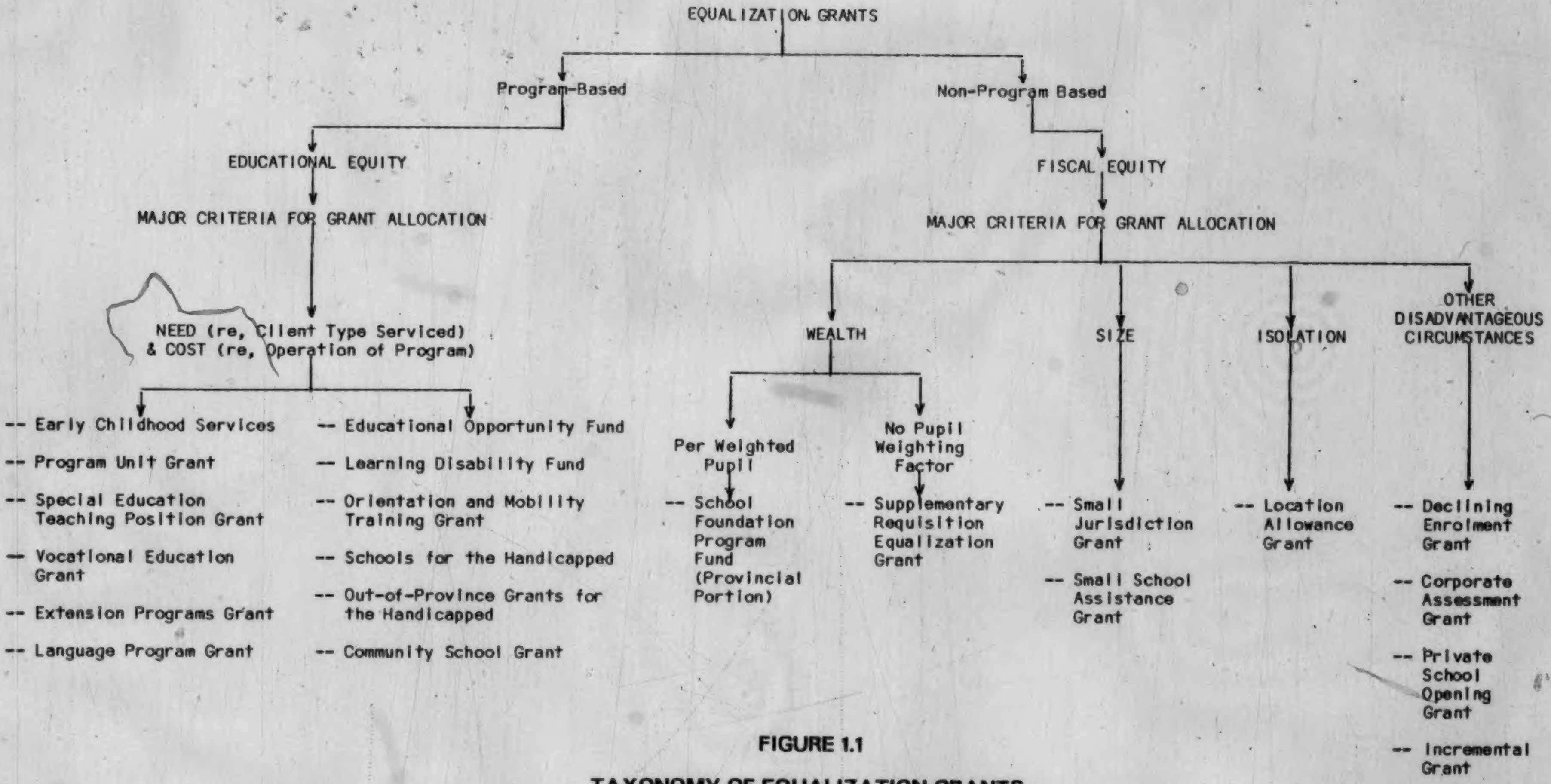
EQUALIZATION GRANTS
Program-Based
Non-Program Based
EDUCATIONAL EQUITY
FISCAL EQUITY
MAJOR CRITERIA FOR GRANT ALLOCATION
MAJOR CRITERIA FOR GRANT ALLOCATION
NEED (re, Client Type Serviced)
& COST (re, Operation of Program)
-- Early Childhood Services
-- Program Unit Grant
-- Special Education Teaching Position Grant
— Vocational Education Grant
-- Extension Programs Grant
-- Language Program Grant
-- Educational Opportunity Fund
— Learning Disability Fund
-- Orientation and Mobility Training Grant
-- Schools for the Handicapped
-- Out-of-Province Grants for the Handicapped
-- Community School Grant
WEALTH
Per Weighted Pupil
-- School Foundation Program Fund (Provincial Portion)
No Pupil Weighting Factor
-- Supplementary Requisition Equalization Grant
SIZE
-- Small Jurisdiction Grant
-- Small School Assistance Grant
ISOLATION
-- Location Allowance Grant
OTHER DISADVANTAGEOUS CIRCUMSTANCES
-- Declining Enrolment Grant
-- Corporate Assessment Grant
-- Private School Opening Grant
-- Incremental Grant

FIGURE 1.1

TAXONOMY OF EQUALIZATION GRANTS

(Revised from Jefferson, 1980a:3)

As shown in this figure, equalization grants to local school jurisdictions are either distributed on the basis of the program being offered by the various jurisdictions (educational equity) or on the basis of specific disadvantageous circumstances (as identified by the government) experienced by some jurisdictions (fiscal equity). As defined by Pike (1971:2), "An equalization grant is one which varies in amount in inverse proportion to a measure of ability to pay, which traditionally in educational finance is a measure of real property assessment."

All equalization grants identified as contributing to the achievement of educational equity are ones which are distributed to school jurisdictions on predetermined needs and cost criteria. Furthermore, it is assumed that if there is a need for a specific program (e.g., Early Childhood Services) the respective jurisdiction has or is in the process of making provisions that will enable the identified need to be adequately met. Thus, in their effort to assist these jurisdictions the government has provided by way of its School Grants Regulations a formula base level of funding to the respective local school jurisdictions. For example, a Special Education Teaching Position Grant is available to those jurisdictions serving pupils classified as educable mentally retarded, trainable mentally retarded, severly learned disabled, et cetera. As remarked by Wilensky (1970:43), "equalizing educational opportunity implies the removal of any differences in the availability of educational services."

The achievement of educational equity through the twelve grants classified under that heading in Figure 1.1, however, may be hampered by an intentional or unintentional incentive factor within the governing regulations. For example, although the Vocational Education Grant is primarily set up to provide monetary assistance for the operation of vocational programs, at the same time the grant is acting as an incentive for boards to become involved in the operation of such programs. This incentive is reflected in subsection 1(a) of the Vocational Education Grant regulations[1]:

> (1) A grant may be paid in accordance with this subsection to a board in respect of instruction provided by it
>
> (a) the sum of $2,620 per year for each shop facility or group of shop facilities at any one school site where the shop facility or group of shop facilities is used for day school instruction in any one trade or other occuptional subject in a vocational program.

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[1] Regulations under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order, 1980.

Whether this incentive nature of the Vocational Education Grant and other provincial grants counteracts possible gains toward the achievement of educational equity may be debatable and is beyond the scope of the present study.

The objective of the other nine grants mentioned in Figure 1.1, in the aggregate, is to decrease the fiscal inequality that exists among school jurisdictions as a result of circumstances beyond the jurisdictions' control. The circumstances specifically identified by the government as requiring special consideration would seem to be wealth, size, isolation, loss of students because of declining enrolments, and the loss of students due to the operation of private schools.

Note must be made, however, that of the nine 1980 - 1981 grants classified as fiscal equalization grants in Figure 1.1, only the Supplementary Requisition Equalization Grant (S.R.E.G.) and the School Foundation Program Fund (S.F.P.F.) specifically recognize disparity between school jurisdictions on the basis of their equalized assessment. For this reason, recognition is given to the probability that in the aggregate all nine grants have a fiscal equalization effect; though individually the grants compensate for different circumstances. For example, the Corporate Assessment Grant will have a disequalizing effect when the criterion of wealth is used as the yardstick. The reason for this disequalizing effect is that those jurisdictions which suffered a financial loss due to the legislative reinterpretation of undeclared corporate assessment were being partially compensated for their losses by the government, this compensation extending over a five year period (1980 - 1984). Nevertheless, the Corporate Assessment Grant does appear to have an equalizing tendency on the basis of the ability of jurisdictions to adjust their operational cost to the diminished amount of funds available for their use.

The overall result of the above apportionments, in terms of the achievement of fiscal equalization, is a plan that guarantees support for a minimal educational program as well as support for the concept of equal yield for equal effort. Financial aid in support of the equal yield for equal effort concept implies that all school boards with the same mill rate, a measure of effort in Benson's (n.d.) terms, levied against their equalized property assessment, would have the same financial revenues available per pupil; that is, the same yield, according to Benson (n.d.).

The extent to which the provincial system for financing public education achieves fiscal equalization among its school jurisdictions, however, remains in question. Without this knowledge any attempt to improve the system would lack the desirable empirical base.

SIGNIFICANCE OF THE STUDY

Johns and Alexander (1971a:173) in their analyses of the equalization tendencies of current school finance programs remarked that "Before educational financing can be improved, one must first know the current status of educational finance and from this determine the strengths and weaknessess of the present system." From this statement one may project that equality of resources is a necessary and reasonable starting point for achieving equalization of educational opportunity. Ensuring that equality of resources exists, however, becomes an ambitious undertaking for any government given the diversity in fiscal circumstances among school jurisdictions. The existence of such fiscal imbalances among local school jurisdictions necessitates sometimes high level of variability in jurisdictional monetary requirements. Most governments therefore adopt a formula approach in the allocation of education dollars. Through this approach the hoped for result is that dollars will be allocated more equitably among school systems. Still, as noted by Grant (1976:13), "The method or the formula does not assume that the available resources are adequate to meet all district requests. The formula simply allocates existing dollars more equitably."

The Alberta basic educational grant system, for example, reflects an attempt to comply with this stance that fiscal equalization is a prime objective of an educational finance plan. That is, the Alberta grant sytem appears to have been structured on the premise that every local school jurisdiction, regardless of its wealth, should be able to offer an adequate minimum level of education for its students.

This study represents an attempt to determine the extent to which fiscal equalization has been achieved by the provincial educational finance plan. The study is structured into two phases. The first phase examines the extent to which fiscal equalization was being achieved among Alberta local school jurisdictions. The second phase of the study examines whether a greater degree of fiscal equalization would have been achieved under other allocation plans. In both phases of the study, the extent to which the grant amount received and the jurisdiction's wealth varied inversely was taken as the determinant of whether the grant system was achieving fiscal equalization.

STATEMENT OF PROBLEMS

The Alberta finance plan appears to have been designed to permit local school jurisdictions to (1) meet the educational needs of their pupils and to (2) offer their pupils an acceptable minimum level of education without undue fiscal restraint. The methods utilized by the government tend to be specially designated grants such as the special education grants, categorical grants such as the Supplementary Requisition Equalization Grant, and a school foundation fund.

This study was the vehicle used for examining the level of fiscal equalization achieved by the categorical grants and the foundation fund, taken together, under this existing provincial finance plan as well as under alternative financial plans. The specific problems investigated in the study are given below.

Problem 1

The first problem of the study was to determine the extent to which fiscal equalization had been achieved among local school jurisdictions in Alberta in the years 1975 through 1980. The year 1975 was chosen as the base year because it was the year during which major categorical grants were introduced in the Alberta School Grants Regulations. The year 1980 was the most recent year for which information was available on the operation of the nine categorical grants being used in the province.

The accomplishment of the aforementioned task was through the investigation of the following problem:

Problem 1:

To what extent has the distribution of provincial funds among local school jurisdictions in Alberta achieved fiscal equalization?

To assist in answering Problem 1 the following sub-problems were investigated:

Sub-Problem 1.1:

What is the distributional pattern of provincial grants in terms of mills per school jurisdiction?

Sub-Problem 1.2:

What is the distributional pattern of provincial allocations (exclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?

Sub-Problem 1.3:

What is the distributional pattern of provincial allocations (inclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?

Sub-Problem 1.4:

What are the characteristics in terms of ability-to-pay, tax effort, and educational need of school jurisdictions receiving differing levels of provincial support?

Problem 2

The second problem of this study was to determine whether alternative plans of financing education might have achieved a greater degree of fiscal equalization among Alberta local school jurisdictions. In relation to this concern, Johns and Alexander (1971a:173) remarked that: "Every finance program has both a purpose and a method for distribution. However, the avowed purpose of a finance program may not always be carried forth by the formula chosen to distribute the funds." Thus, the following problem was investigated:

Problem 2:

Would the implementation of a different grant funding mechanism achieve significantly improved results over the present provincial allocation plan?

In seeking an answer to Problem 2 the following sub-problems were investigated:

Sub-Problem 2.1:

What is the degree of fiscal equalization obtained under a power equalizing plan?

Sub-Problem 2.2:

What is the degree of fiscal equalization obtained under a percentage equalizing plan?

Sub-Problem 2.3:

What is the degree of fiscal equalization obtained when the amount of the grant is adjusted by a price index under

a) the existing allocation plan?

b) a power equalizing plan?

c) a percentage equalizing plan?

DEFINITIONS

Ability-to-Pay: The Canadian Teachers' Federation (1980:10) documentation of the operating elements of various provincial grant systems revealed that all provinces utilize equalized assessment of real property as the measure of local ability to support education. In like manner, for the purpose of this study, a school jurisdiction's ability-to-pay was defined as its equalized assessment of real property per pupil.

Categorical Grants: For the purpose of this study, categorical grants denote funds which are non-restrictive and can be used with wide local discretion. These grants include the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, and the Incremental Grant. The Alberta Department of Education has grouped the above eight grants under the label "fiscal equalization grants".

Designated Grants: For the purpose of this study, designated grants denote provincial funds of a restricted nature, usually for a particular educational need identified by the provincial legislature. Provincial grants in this classification are the Early Childhood Services Grant, the Vocational Education Grant, the Extension Program Grant, the Language Program Grant, the Community Schools Grant, the Educational Opportunity Fund, the Learning Disability Fund, the Schools for the Handicapped Grant, the Orientation and Mobility Training Grant, the Out-of-Province Grants for the Handicapped, the Special Education Teaching Position Grant, and the Program Unit Grant.

Educational Equalization: For the purpose of this study, educational equalization is taken to mean the provision of provincial funds to ensure that the availability and quality of programs is uniform across school jurisdictions in relation to the pupil population desiring education.

Educational Need: The phrase educational need throughout the literature has evaded a consistent definable meaning. Instead, the educational need of a school jurisdiction has been operationalized to refer to various aspects of the population being serviced or the characteristics of the jurisdiction regardless of the different classification of pupils being serviced. For the purpose of this study, the educational need of school jurisdictions was taken as their eligible enrolment count as of September 30th for any given school year.

Eligible Enrolment: The eligible enrolment of a jurisdiction is defined as the number of pupils for whom the school jurisdiction was entitled to receive financial support. Excluded from this count are Treaty Indian children. This exclusion is in agreement with that used by the Alberta School Grants Regulations, 1980. Here, Treaty Indians are excluded since the Government of Canada not the Provincial Government is responsible for financing their education.

Equalization: Corbally (1962:48) gave the following definition of the term equalization:

> As used in school finance, [equalization is] an attempt to use other than local funds to insure that each school district in a state will receive adequate financial support to enable it to provide a satisfactory educational program without requiring undue financial effort of those who by reason of circumstance reside in school districts with below-average financial ability.

For the purpose of this study, equalization was restricted to attempts by the Government of Alberta to ensure sufficient provincial financial support to each school jurisdiction such that each jurisdiction is able to provide a substantial educational program without undue financial effort.

Fiscal Equalization: For the purpose of this study, fiscal equalization is taken to mean the existence of an inverse relationship between the amount of grant money distributed to school jurisdictions and the jurisdictions' wealth, both treated on a per pupil basis.

Fiscal Neutrality: Fiscal neutrality is a United States court-defined equity standard in school finance. It implies that the operating expenditures per pupil are not related to the wealth of the school jurisdiction. Therefore, "a system is judged [fiscally] neutral if there is little or no [direct] relationship between local district wealth and local district expenditures per pupil" (Hickrod, Chaudhari and Lundeen, 1980:182).

Operating Expenditures: Operating expenditures are defined as the total expenditures of the school jurisdictions less expenditures for capital outlay and debt retirement (Atherton, 1968:25). Operating expenditures include expenditures for instruction, administration, operation and maintenance, and transportation.

School Foundation Program Fund: Benson (1978:298) asserted that a foundation program ". . . stands for the amount of dollars per pupil required to purchase the basic elements of an educational program." In this study, foundation program refers to the School Foundation Program Fund established by the province in 1961. Meek (1979:17) described the School Foundation Program Fund (SFPF) in the following manner:

> . . . the School Foundation Program Fund consists of revenues collected through a uniform yearly provincial levy on all real property (residential property exempted in 1973) and an annual legislative appropriation from the general revenues of the province. These revenues are used to provide grants-in-aid to local school jurisdictions for provision of a basic education program.

School Jurisdictions: School jurisdictions are taken to be local publicly supported school systems in Alberta. These include school divisions, counties, public and separate districts (including rural, village, town, and city districts), consolidated school districts, and regional school districts of the province.

Supplementary Requisition: A method used by local school jurisdictions to obtain revenue in addition to grant money received from the province for the purpose of providing services in excess of those which would be provided by the "school foundation program" allocations and provincial grants alone. This additional revenue is obtained by the jurisdiction levying a mill rate in addition to the uniform "mandatory" provincial levy.

Tax Effort: To Johns and Alexander (1971a:60), tax effort refers to "the extent to which a taxing jurisdiction -- for example, a state or a school district -- is using its capacity to raise revenue by taxation." For the purpose of this study, tax effort is defined as the supplementary requisition mill rate levied by a school jurisdiction. That is, it represents the degree to which the ratepayers in a given jurisdiction are willing to tax themselves for education expenditures beyond the mandatory foundation levy.

Wealth: Jargowsky, Moskowitz and Sinkin (1977:201) and Odden (1977:359) claimed that wealth is generally measured by assessed valuation of property per pupil. This measure focuses on the value of real property of a jurisdiction, and has the limitation that the ownership of property is not necessarily related to the income of the people. Other possible measures of wealth therefore are income of the residents of a given school jurisdiction as well as revenue raised by other taxation methods, for example, sales tax. However, due to the lack of data concerning other measures of wealth at the jurisdictional level, the wealth measure used for the purpose of this study was equalized assessed property valuations (equalized assessments) of school jurisdictions.

DELIMITATIONS

The study omitted all grants allocated to school jurisdictions for the implicit purpose of assisting those jurisdictions having to serve special groups of pupils such as the mentally handicapped pupils. The grants included in this omission were: Early Childhood Services Grant, Vocational Education Grant, Extension Program Grant, Language Program Grant, Community Schools Grant, Educational Opportunity Fund, Learning Disability Fund, Schools for the Handicapped Grant, Orientation and Mobility Training Grant, Out-of-Province Grants for the Handicapped, Special Education Teaching Position Grant, and the Program Unit Grant.

In addition, only inter-jurisdictional rather than intra-jurisdictional differences were examined. Therefore, though it is acknowledged that there may exist variations within each jurisdiction, the assessment of these variations was not a purpose of the present study.

ORGANIZATION OF THE DISSERTATION

The purpose of the study, its significance, statement of the problems to be investigated, pertinent definitions, and delimitations of the study are contained in this first chapter. Chapter two is devoted to a review of literature related to the focus of the study, namely, the definition and measurement of *financial equity*, as well as background information on the methodological techniques used in this study. In chapter three the literature on equalization reform efforts of various states and provinces, with emphasis on the Province of Alberta, is reviewed. Chapter four is a description of the research methods employed in the study. The results of the data analysis are presented in chapters five through eight. Specifically, chapter five reports the findings associated with the first major problem of the study, namely, the extent to which fiscal equalization was achieved among the local school jurisdictions in Alberta for the years 1975 through 1980. Chapter six reports the predictive powers of identified independent variables in reference to the degree of fiscal equalization found to exist in chapter five. Chapter seven presents the findings associated with the second major problem of the study, namely, the extent to which fiscal equalization among school jurisdictions for the years 1975 through 1980 would have been achieved by either a power equalizing or a percentage equalizing finance plan. Chapter eight reports the extent to which fiscal equalization was achieved under the existing provincial finance plan, a power equalizing finance plan, or a percentage equalizing plan when the allocated provincial funds are adjusted by a price index. A summary of findings, conclusions drawn, and implications for school finance is given in the final chapter. Relevant background information to the study has been placed in the appendices.

CHAPTER 2

PERSPECTIVES ON THE COMPONENTS OF EQUITY AND THEIR ATTAINMENT

In this chapter a review of the literature is presented on three components of equity: (1) fiscal equity, (2) program equity, and (3) cost differentials. Secondly, a review of the literature is presented pertaining to how one would measure the degree to which wealth equalization (fiscal equity) is achieved and the types of financial models that may be adopted by governments attempting to achieve wealth equalization among their school jurisdictions.

INTRODUCTION

Education, as documented by Section 93 of The British North American Act, is a provincial function and therefore the provinces have a direct responsibility for contributing financially to the support of all local school jurisdictions within their span of authority. The wording of Section 93, however, makes no specific reference to who bears the legal responsibility for the financing of education. In regards to this legality, Atherton (1979:2) remarked that:

> While centralized control of education insofar as curriculum is concerned has been a long-standing tradition in Canadian education, there is strong evidence to suggest that the financing of education is also seen as the responsibility of the Provincial Government.
>
> Legally the position has been taken in Canada that since Provincial Governments have exclusive jurisdiction in educational matters, any province which provides for compulsory education should arrange for adequate financial structures.

In Alberta, for example, succeeding provincial governments have recognized and accepted their responsibility in the financial aspects of education as apparent from the establishment of the Foundation Program, and over the years, the assumption of the major financial commitments for the Foundation Fund by the Provincial Government

(Provincial-Municipal Finance Council, 1979:343). The attainment and allocation of public funds for the purpose of education, however, is carried out in competition with other provincially funded services. Consequently, school financing policies generally reflect the value choices of the public, the order of priorities established in the allocation of resources, and political philosophy.

This concern with the allocation of funds in support of education was outlined by Alexander and Jordan (cited in Johns, 1973) on the basis of court decisions within the twentieth century. The first generation of cases reflected the taxpayer as the aggrieved party where the primary motive of the taxpayer was to save money by contesting a tax even to the point of opposing the equalization of educational opportunity. The second generation of cases, however, tended to take on the opposite stance with the aggrieved party now being the student; no longer was it acceptable to have educational opportunity dependent on the fiscal ability of the school jurisdiction in which the student lived. The third generation of cases were essentially an extension of the second generation concern with fiscal equity. Not only was the question of equalization of financial resources raised, but also the extent to which governments must go in providing equal opportunity. This increasing focus on matters of equalization was also noted in the writing's of Cohn (1974), Hettich, Lacombe and von Zur-Muehlen (1972), Augenblick (1979), and Kelly (1978).

This increased attention to equalization, however, has also created conflict (Kelly, 1978) and stress (Van Fleet and Boardman, 1971) in the fiscal systems from which school jurisdictions derive their resources. As remarked by Garvue (1969:69-70),

> The process of decision-making regarding allocation of resources for education is not analogous to the price-demand schedule in the market system of material goods. The process differs in that it is a political one, and in part an involuntary one, by which a public response or demand is interpreted by politicans at all levels of government and then translated into educational and corresponding fiscal programs.

Expressions of public concern suggested that many educational expectations (both quantity and quality) were interpreted by the politicans as a desire by the public for equity among school systems (Cohn, 1974; Beck, 1979; Mann, 1980). This is evident from the focus of various educational finance plans discussed in some detail in a later chapter. What is meant by equity is a continual point of debate with the vastness of this controversy being discussed next.

THE CONTROVERSY OVER THE MEANING OF EQUITY

The concept of "equity" has been subject to numerous interpretations. Furthermore, these interpretations have tended to be the product of two interacting variables: (1) the target group receiving benefits (e.g., students, taxpayers, school jurisdictions, teachers, etc.) and (2) the objects being distributed equitably. Within any equity theme is also the belief in equality, a term as evasive as the term equity. For example,

> At one moment, it [equality] may refer to identity of treatment among groups. At another, it may be held to require equal attention to some other value, such as choice (as with fiscal neutrality) or needs as variously defined; utilizing such an approach will produce outcomes which deviate from identity of treatment (Kirp, 1980:22).

The complexity of "equality" was further substantiated by Friedman and Wiseman (1980:35) in their multidimensional conception of equality in which equality included such diverse concepts as the educational inputs to children, the educational effects of those inputs, or the post-graduation life success of those educated.

Equality by implication and thus equity by definition requires that the distribution of resources be fair and just in some sense. For this reason, Krueger (1975:95) cautioned that "ethical appeals by themselves are not sufficient when school finance reform involves significant changes among privileged and unprivileged school districts." Bezeau (1977:219) remarked that "ideas of equity derive from some general philosophical scheme and may be abstract and difficult to measure." The significance of Krueger's and Bezeau's statements is evident from Augenblick's (1979:27) assertion that depending on how one addresses the concerns of "who" and "what," there are different principles of equity being achieved.

Rideout (1980), in his address on problems and prospects for education finance, presented a thesis on how to handle the equity theme. Rideout identified the equity theme of education finance as the idea that all children should be treated equally in terms of either access to adequate schools, dollars spent, or some measure of educational output. Implicit within this statement is the assumption that equality of educational opportunity for all children requires at least equality of resources. A parallel position was taken by Augenblick (1979) as he argued that in order to achieve equity one must attend to such factors as (1) the school district's fiscal capacity, (2) pupil education needs and categorical programs, and (3) the purchasing power of the school district. Expanding upon the importance of a district's purchasing power, Augenblick (1979:30) stated that:

> Differences in education expenditures are caused by two factors: differences in the quality or level of services provided and differences in the cost of providing those services. The former are within the control of local school districts while the latter lie beyond the control of districts and are caused by factors such as geographical location, characteristics of the student body and other demographic characteristics of the school district.

What must not be ignored in the search for equity is the variation in expenditure per pupil as warranted by interdistrict variations in the cost of providing educational services. Therefore, claims Benson (1978:298): ". . . a properly functioning grant system distributes money in direct proportion to expenditure requirements and in inverse proportion to the amount of local resources." Hence, in designing an equitable finance system, the competing wants of school jurisdictions needs to be addressed. As outlined by Osburn and Schieber (1981:11), ". . . representatives from high cost, urban districts negotiate for larger categorical programs and cost adjustments. Rural and moderately wealthy suburban representatives generally favor larger equalization grants."

Such competing desires are but a sample of the many constraints equalization reform efforts must contend with; others are elaborated upon below.

Constraints to Equalization Reform Efforts

Not only does the lack of agreement among jurisdictions as to government allocation of funds constrain reforms promoting equalization, but the inadequacy of available revenues also restricts such reform efforts. The restricting effect of limited resources is the result of equating equalization to leveling up (Berke and Goettel, 1972; Johns, 1976; Cohen, Levin and Beaver, 1973). That is, a save-harmless provision is implemented to ensure that "those who would theoretically lose resources . . . are guaranteed at least their current level of school spending" (Berke and Goettel, 1972:121). A government adopting policies contrary to this philosophy would not find such policies politically feasible. Thus, major reforms in school financing will likely be achieved when governments have a surplus of funds or when revenue is increasing (Johns, 1976:544). Yet, even in this positive financial situation, "leveling up . . . is expensive and requires major statewide tax reform" (Cohen, Levin and Beaver, 1973:50).

Consequently, demands for equalization and property tax relief will most likely conflict, and when they do, Cohen, Levin and Beaver (1973:50) claim that a demand for property tax relief will most likely prevail. A recent court case illustrating such a situation is the Levittown v. Nyquist litigation. The plaintiffs, in the words of Scheuer (1979:433), argued that "the state's system of allocating school aid, although designed to compensate for the district-to-district variation in fiscal capacity, failed to achieve its primary purpose: equalization of the ability to spend for education." If the Levittown's decision is upheld, then not only has property tax relief prevailed over the attempts of the government to promote equalization among school jurisdictions but the entire structure of governmental financing will likely warrant revision.

Scheuer (1979:436) projected that if the Levittown's decision stands,

> Public education will claim a greater share of state funds and the cities a greater share of the total pie. The state role in providing funds, services, and oversight may well increase. Increased state funding will alter tax incidence and will impinge on local patterns of self-governance and educational decision making.

The fear of localities of greater governmental control over local prerogatives and decision making in this perspective becomes real. Yet, Graham (1968:139) contends that "Autonomy means very little to the poorer . . . localities unless they have sufficient financial resources to perform their functions at levels comparable to those in other . . . localities."

Perhaps for this reason, Carroll (1979:23-24) observed the following trend in thought and practice by those dealing with the problem of equalization:

> It is generally agreed that equity requires fiscal neutrality. . . . And to many reform advocates, fiscal neutrality is sufficient for equity. That is, equity is satisfied if all districts have an equal opportunity to obtain funds regardless of the extent to which they take advantage of their opportunities.

In essence, "[fiscal] neutrality . . . requires that any district be able to obtain the same (adjusted) funding per pupil as any other district provided only that it put forth the same effort" (Carroll, 1979:23). Two attempts at attaining fiscal neutrality and hence fiscal equalization are seen in the Michigan program (Phelps and Jones, 1972) and the Alberta financing plan (Meek, 1979). In each case, the financial plan consisted of a foundation program with an added power equalizing feature.

In conclusion, Harrison (1976:9) noted that "The basic premise [for equalizing aid] has been that it is not simply how much aid is available, but how it is distributed, that will provide the key solution to problems of fiscal imbalance between rich and poor school systems." The distribution factor not only contributes to existing flaws in reform efforts but provides the key to solving the problems of fiscal imbalance between school systems.

Flaws with Education Finance Reform Efforts

Garms, Guthrie and Pierce (1978), Tanner, Stollar and Tomlinson (1974), Harrison (1976), and Grubb and Michelson (1974) noted the following situations which reduced the equalization impact of equalization aid programs:

1. States adopting equalizing aid formulas are reluctant to appropriate very much money for the financing of the aid program.

2. Only a few states have instituted the concept of "recapture" which allows the wealthy districts to retain their privileged position of not being required to submit to the state any amounts raised over the regulated minimum level.

3. Most equalizing aid formulas have a "minimum level" provision that in effect guarantees a certain amount of funds for each school system; the result being a reduction in funds available for poor school districts and consequently a reduction in the equalization impact of the aid formula.

4. The existence of a "save-harmless" provision in most financial plans results in the wealthy districts continuing to receive a disproportionate share of governmental assistance. Such provisions guarantee that under a new aid plan no school system will receive a lower level of state funding than under the old aid plan.

5. Criteria other than local property tax assessments are usually ignored in equalizing aid formulas. The hazard of this approach is explained by Harrison (1976:12):

> The equalizing aid formulas sometimes ignore that two areas with equal nominal assessments may have unequal market values, due to differing assessment ratios, and thus may have differing amounts of actual wealth. Even if the actual property wealth is identical, the amount of personal wealth may differ dramatically, with the area poorer in personal wealth being far less able to pay the same property tax rate.

6. Equalizing aid formulas tend to ignore the fact that different areas with the same wealth may differ radically in demands placed on local governments for non-educational services. This notion of "municipal overburden" fails to be addressed by most governmental educational equalization plans.

Granted that the above are potential hazards in equalization reform efforts, many of these flaws have been minimized by recent state and provincial efforts. The success of such efforts is discussed in more detail in the following chapter under a review of state and provincial reform. In the next section, areas are discussed that need to be given attention before equity reforms are in fact implemented.

Guidelines for Equity Reforms

Furno (1981) and Lovett and Mueller (1978) proposed the use of a number of guidelines for governments aspiring to attain equity among their respective school jurisdictions. These guidelines, as outlined by Furno (1981:377-378) and Lovett and Mueller (1978:463-464), include:

1. *Adequate educational programs.* The state should assume a basic responsibility for guaranteeing an adequate educational program for each pupil in the state according to educational needs.
2. *Comprehensiveness of educational program.* The state should incorporate into its plan appropriate recognition for all the elements of the adequate educational programs guidelines and to provide sufficient funds for all programs and facilities.
3. *Cost variations.* The state should analyze and evaluate the expenditure levels of its local school districts -- not only on the basis of pupil counts but also according to the differing educational needs of pupils.
4. *Equalization of financial ability.* The state should guarantee each district equal access to equal fiscal resources per unit of educational need.
5. *Tax support.* The state should develop an equitable tax base for the support of education and should develop a tax structure which treats different classes of taxpayers equitably.
6. *Effective and efficient educational and financial decisions.* The state is encouraged to examine and evaluate the effects of its plan upon local decision making.
7. *Evaluation guidelines.* The state not only should improve and enhance its data gathering capabilities but also its processes and procedures for analyzing and evaluating the effects of its plan upon the various equity guidelines.

Implied by these seven guidelines and echoed by Doherty (1961), equalization has less to do with the improvement of education than it does with the economic ability and managerial skills of the government.

How these guidelines have been incorporated by governments as well as how such guidelines need to be addressed is the subject of the next section.

COMPONENTS OF EQUITY

To claim that the focus of a finance plan is the achievement of equity is not a simple statement; equity is a multidimensional concept. Therefore, to realize the full extent to which equity is achieved by any given finance plan three dimensions or components need to be addressed: (1) fiscal equity, (2) program equity, and (3) cost differentials.

Fiscal Equity: Its Meaning and Composition

The first component, fiscal equity, has tended to overshadow the other aspects associated with the concept equity. For example, many writers have tried to explain the concept of equality of educational opportunity by confining their attempts to the narrower field of fiscal equalization. As remarked by Wilensky (1970:43), "equalizing educational opportunity implies the removal of any differences in the availability of educational services." As stated by the New York State Commission in 1973, "the quality of a child's education should . . . be no more a function of how highly his neighbors value education than how wealthy they are" (p. 89). Yet, to design a truly equitable funding program, the accounting of the educational requirements of the pupils and the cost differences among local school jurisdictions must be examined (Osburn and Schiefer, 1981:2; Scheuer, 1979:433).

A major factor leading to differences in expenditure levels among school jurisdictions is the disparity in local wealth (Beck, 1979; Norton, 1966). Wealthy districts can easily finance high levels of school expenditures from local tax revenues whereas poor districts need some financial assistance to operate at similar levels of expenditures. As a consequence, when individuals speak of equity in education, attention is turned to the process by which funds are directed from the government to the local school jurisdiction (Cohn, 1974). Unless the local share required of the participating jurisdiction is a function of the relative fiscal capacity of that jurisdiction and the percentage of school revenue provided from local revenue is somehow controlled, the governmental share will not be equalizing (Berke and Goettel, 1974; U. S. Department of Health, Education and Welfare, 1971). Therefore, writers like Briley (1971:116) have suggested that the government mandate the desired level of local taxes to be levied for the support of schools. This suggestion was strengthened by Wilensky (1970:42) when he reported that:

> Although an equal dollar expenditure does not necessarily imply an equal educational opportunity, a recent study of the Michigan educational system does indicate a direct relationship between per pupil expenditures and educational opportunity.

For example, Morris's study of 3,727 secondary schools in nine southern states (cited in Governor's Commission on Public School Finance, 1979:47) revealed that an increase in subject offerings was closely related to both enrolment size and per pupil expenditures. Furthermore, Garms (1978:4-5) observed that

> . . . the main state allowances have been for two things that affect rural school districts most: need for extensive bus transportation, and small classes (necessitated by population sparsity) that make the cost of education per student much higher.

Implicit then, is the notion that fiscal equalization programs depend in large measure on the definition and measurement of local fiscal capacity. The literature, however, reveals no consensus on the appropriateness of alternative measures of this concept, fiscal equalization. Nevertheless, the New York State Commission (1973:57) claimed that, "any phased change in the direction of greater educational equality would surely win judicial approval if it were appropriate to the existing situation." As surmised by Sherman (1981:20), "a policy that focuses directly on educational resources may promote fiscal neutrality."

A caution, nonetheless, is offered by Johns (1976:549): "Even if a state develops a program of school financing which approaches the ideal for a given year, it will not be ideal in succeeding years because educational need and social and economic conditions continually change."

The principle of fiscal equity, then, "is an extension of the widely accepted and fundamental doctrine of equal treatment of equals, or 'horizontal equity' as it is sometimes called" (Graham, 1968:132). Within this domain is the concern for children or taxpayer equity. When considering taxpayer equity, Johns and Morphet (1975:274) reported that "the local taxpaying ability of school districts in reality is not their theoretical taxpaying ability, but rather a measure of their accessibility to local tax revenue." If this accessibility is to remain limited to funds raised by property taxes, then the local taxpaying ability, for the purpose of supporting schools, should be measured only in terms of the equalized value of the taxable property in the district (Johns and Morphet, 1975). In the end however, the choice of an appropriate conception of taxpayer equity is a value judgment. Nevertheless,

> Value judgments need not be entirely individualistic because sometimes there are preferences that are widely held, but a prerequisite to choices of value judgments is an understanding of the possible alternative conceptions (Berne and Stiefel, 1979c:53-54).

Once the judgment is made, however, interdistrict disparities in per pupil expenditures must be addressed. One reason for this concern is that "equal expenditures per pupil . . . is not synonymous with equal resources because of cost-based differences in the real value of the educational dollar across districts" (Hyman, 1977:1). This disparity in school expenditures was found by Johns, Alexander and Jordan (1972:103) to be largely a function of the variations in fiscal capacity of the fifty states examined.

Thus, in addressing the problem of taxpayer equity one needs to be aware of the immediate concerns of specific school jurisdictions. In addition, one must be aware of whether the concern is with the characteristics of a school finance plan (ex ante taxpayer equity) or with the actual expenditure patterns of school districts (ex post taxpayer equity). Berne and Stiefel (1979c:52-53) make a further distinction between these two concerns as follows:

> The ex ante school finance approach, whether seen as the relationship between tax prices for education and house values or equal yield for equal effort, includes a measure of both spending and taxes, while the ex post school finance approach relates spending alone to wealth.

The principle of fiscal equity, therefore, should be implemented with respect to minimum levels of services rather than toward the achievement of absolute or complete fiscal equity. "With this modification, transfers made according to the fiscal equity principle, far from impairing provincial and local autonomy, give positive content to it" (Graham, 1968:39). Nevertheless, Graham (1968:133) claimed that

> The implementation of the principle of fiscal equity is desirable . . . both on the ethical ground that it permits equal treatment of equals and on the economic ground that it is conclusive to optimum allocation of resources.

In conclusion, Jordan and McKeown (1980:117) observed that advocates of taxpayer equity have often ignored the impact of certain types of expenditure or revenue controls upon the "ability of the school district to address the educational needs or economic conditions that may require additional funds." For this reason, the promotion of taxpayer equity by way of fiscal neutrality is a concern.

Fiscal neutrality. The conflict between fiscal neutrality, as a method by which equalization may be attained, and the actual attainment of equalization was explicitly stated by Carroll (1979:6) in the following manner:

> Equal fiscal outcomes will result from a system which provides equal fiscal opportunities only if every district chooses to realize its opportunities to precisely the same degree. It seems unlikely that diverse communities would all have precisely the same taste for public education vis-a-vis private and other public goods and services. Thus, if a state's school districts are confronted with equal fiscal opportunities (i.e., a fiscally neutral school finance system), they will select different levels of funding. Conversely, a state's school districts will exhibit equal outcomes only if the school finance system precludes local choice and mandates both the funding level and the level of the tax effort.

This principle of fiscal neutrality in producing school revenue, then, "is a critical ingredient in equalizing education, but it must be complemented by a distribution scheme that achieves the same purpose" (Gibson, 1976:58). As noted by Harris (1978:491), fiscal neutrality is necessary because,

> ... nonadherence to this principle places the state in a position that is susceptible to school finance legal challenges and not sufficient in the sense that it may not be consistent with the political reality or fully address different educational needs.

To complicate the matter wealth or fiscal neutrality has recently been conceptually divided into "simple" fiscal neutrality versus "conditional" fiscal neutrality. Both these concepts are defined below.

Simple neutrality. Simple neutrality, according to Friedman and Wiseman (1980:44), "is a principle that requires average expenditures per child to be the same among property poor districts as among other districts." The attainment of fiscal neutrality would guarantee the protection of children from the influence of differences in wealth.

In the past this conception of neutrality has been dominant in school finance reform as indicated by the California Supreme Court Serrano decision where simple neutrality was the paramount principle. Working from this premise, Hickrod, Chaudhari and Hubbard (1979:4) claimed that for a school finance reform to be judged fiscally neutral, the "reform must reduce the strength of the relationship between wealth and expenditures per pupil." Or as stated by Carroll (1979:161), "fiscal neutrality . . . requires that [districts'] revenues [or expenditures] per pupil be independent of property tax bases."

Conditional neutrality. Hickrod, Chaudhari and Hubbard (1979:4) and Friedman and Wiseman (1980:44) viewed conditional neutrality as a principle in which the relationship between wealth and expenditures is examined with one or more other school jurisdiction characteristics such as tax rate being "controlled." This principle is being proposed by Johns and Magers (1978) and Friedman and Wiseman (1980) as the more appropriate test for states that have any form of "reward for effort" or "district power equalization" grant-in-aid system. A limitation to such an approach, however, is that "it offers no protection to children from the influence of wealth" (Friedman and Wiseman, 1980:44). Yet, as a policy a substantial correlation between expenditures per child and district wealth may result.

Thus, simple neutrality with respect to educational resources demands absolute equality in dollar amounts. Conditional neutrality, alternatively, states that a fair process in the distribution of wealth occurs when the expenditures of school jurisdictions are the same, all other things being equal.

Program Equity: The Complexities of Its Attainment

This section discusses the second component of equity, namely, program equity, and indicates how the achievement of this component fits into the more encompassing concept of equalization of educational opportunity.

An apparent logic of much of the literature to date is that the attainment of fiscal equalization is sufficient for the attainment of equalization of educational opportunity. Yet, as recognized by Jones (1978:12), this situation is true only when the given educational finance plan recognizes necessary differences in per pupil costs due to such factors as types of programs provided for the pupil population (e.g., vocational education; education for the culturally disadvantaged). It is the integration of fiscal and program equalization which is needed for the attainment of equalization of educational opportunity.

Before this marriage is possible, however, the method to be used in measuring either variable must be settled. For instance, Johns (1973:188) remarked that:

> The implication is that school finance programs should not only be adjusted to compensate for deficiencies in a school district's fiscal ability, but programs should be modified to account for the educational need differentials among children.

To accommodate educational needs Lovett and Mueller (1978:461) suggested that consideration be given to each of the following questions:

1. What needs are present and in what distribution among districts?
2. What are the relative costs of different student needs and programs?
3. What level of funding is appropriate for the state to support?

Furthermore, the state should determine whether this funding level represents a "supplemental," an "adequate," or a "quality" program. The importance of the distinction was made clear by McPhil (cited in Governor's Commission on Public School Finance, 1979:47) when he concluded that "the size of a school district is a more important indicator of a quality program than expenditure. A small inefficient district could spend more per pupil than a large efficient district and still have a lower quality educational program."

Two states that have recently moved in the direction of program equalization, on the basis of adequacy, are the states of Connecticut and Minnesota. The Connecticut equity plan (Mann, 1980) creates a partnership between the State Department of Education and each local school district to insure that each public school pupil receives a suitable educational program. Mann (1980:251) described the Connecticut plan in the following manner:

> In this partnership school districts must offer a program of instruction that includes at least the following subject matter: the arts, career education, consumer education, health and safety, language arts, mathematics, physcial education, science, and social studies. In addition, at the secondary level one or more foreign languages must be offered, plus vocational education.

In the Minnesota plan (Lovett and Mueller, 1978:462) recognition is made of a number of cost differentials pertaining to program costs by weighting pupil (i.e., pupils counted as equivalent elementary pupils) at the elementary and secondary levels thereby obtaining an estimate of the cost differentials in the provision of elementary and secondary programs. These two state finance plans are examples of a conscious legislative effort to reverse past funding patterns whereby the amount of money available is determined first and then allowing or insisting that the program be adjusted accordingly.

Nevertheless, until data on program costs are available and program objectives are clearly identified, it is impossible to assess the relationship between school outputs and inputs of school revenue. For example, it is quite possible that a district with a relatively low total amount of revenue per pupil could assign the teaching of reading a high priority and actually spend more per pupil in this area than another district which has more total revenue available per pupil, but which has not given reading as high a priority.

Notwithstanding the assignment of priority to operating programs within school jurisdictions, Briley (1971:50) commented that:

> The cost to provide identical programs for identical students could vary in different sections of the country, [province, or state]. A relatively inaccessible location could require higher building costs, may involve an extensive school transportation system, and could result in higher levels of personnel salaries. Large urban districts may also have higher living costs and higher building costs.

Briley (1971:51) continued on to state:

> Available research indicates that variations in expenditure or revenue per pupil are more nearly related to differences in the per pupil wealth of school districts than necessary variation in costs per pupil resulting from differences in educational need.

Yet, unless the educational needs of the pupil population are recognized by the legislative finance plan, funds could be allocated in a manner that would treat unequals equally; but as noted earlier, equal dollars do not compensate for existing disparities in need.

Cost Differentials: The Final Step to the Attainment of Equity

As is evident from the preceding sections, to maintain equality of educational opportunity among students differing in educational need provision must be made to allocate unequal rather than equal amounts of revenue per pupil. Briley (1971:50) remarked that "School systems . . . not only differ with respect to student need; the systems also differ in factors external to the educational programs." In other words, the cost of providing identical programs for identical students is not uniform among school jurisdictions. Furthermore, as noted by Johns and Morphet (1975:235), educational programs designed to meet the needs of various categories of pupils vary widely in per pupil cost. Special programs for exceptional children, vocational students and culturally disadvantaged individuals are "high-cost" programs when compared to typical elementary and secondary instruction programs. For example, in a study conducted by Rossmiller and Moran in 1973 on the programmatic cost differentials in the Delaware school districts, the researchers found that the average cost of all special educational programs for handicapped elementary pupils was $1,358 per pupil compared with a regular program cost of $795 per pupil. The average cost per pupil in all special educational programs in secondary schools was $1,353 per pupil compared with an average regular program cost of $896 per pupil.

Thus, educational revenue distribution systems should take into account different cost levels. Berke (1974:168) emphasized this point in the following manner:

> On the cost side, if the aim of equality of educational opportunity is to be of substance rather than of shadow, the real costs of school services should be taken into account. Thus, if certain areas of the state have higher costs for purchasing items of similar quality, be those items teachers or blackboards, school expenditures should be deflated or inflated accordingly. High urban costs therefore should result in higher revenues from the state to provide equality. If inflation or union militancy cause concern, lag systems or comparisons with non-educational cost and salary indexes should be used.

Wentzler (1981:311) supported Berke's (1974) contention by claiming that:

> Dollars standards of equal opportunity are attractive because they can be captured by a concise formula, thereby making aid computation both convenient and highly visible. However, such a measure does not eliminate distortions in educational opportunity that arise because of differences in real purchasing power among districts. To correct for this, the dollar standard must be transformed into a measure of real purchasing power, with state aid distributed according to the ability to purchase real resources.
>
> A district's ability to purchase real resources can vary because of the scale of production and/or because of different input supply prices.

One widely used method of comparing the differences in cost is the "weighted pupil" technique (Johns and Alexander, 1971a; Governor's Commission on Public School Finance, 1979). This procedure is based on the assumption that pupil-teacher ratios are lower and operating and capital outlay costs are higher for special education programs. The objective of the technique is to equalize educational resources based on varying student needs while still allowing districts the opportunity to create educational programs and services that meet the unique needs of their pupils without penalizing them for the necessarily high costs incurred in operating such programs. This concept of "cost differentials" or the "weighted pupil" is not a recent development; its roots are in the early research of school finance conducted by Paul Mort at Columbia University in 1933 (Jordan, 1976; Atherton, 1976). The concept weighted pupil refers to an index of dollar allocation with the least expensive program being assigned a value of 1.00 and the allocation to other programs being expressed as a numerical ratio of 1.00. That is, Mort attempted to weight pupils in terms of factors which caused variations in pupil costs within the same district and among the districts of a state.

The findings of the National Educational Finance Project studies and other cost analyses (cited in Stultz, 1976:362–363) indicated that there is consistency in per pupil cost across some well established categories of educational programs, even though costs vary greatly between both program areas and geographic regions.

One of the principal advantages of the weighted pupil approach, according to Jordan (1976:537), is that local districts have the opportunity to identify and utilize flexible delivery systems rather than relying upon traditional institutionalized program structures. Yet, as stated by Stultz (1976:362), "establishing cost differentials that are too low could result in undernourished special programs; too high could cause an unnecessary diminution of the basic educational program." Nevertheless, in examining the extent to which equalization of cost differences was established in the state of Georgia, Matthews (1978:340) found that:

> A relatively wide range of cost differences (23.5 percent) was found to have a relatively small effect on the equity of the distribution dimension of the state plan (less than 3 percent). This evidence indicates effects of cost differences on equality of educational opportunity may be grossly overestimated.

In summary, the financial structure of a state or provincial educational system must take into account and accordingly adjust funding for (a) differentiation in pupil needs, (b) cost variation by way of the varying purchasing power of the education dollar across districts and regions, (c) the interaction between municipal and school finance and the potential need for the school aid system to adjust for the negative impact on education of extraordinarily high needs for non-education expenditures, and (d) that expenditures per pupil should not be a function of local property wealth (Odden and Augenblick, 1980:7–8).

COMMENT ON EQUITY

Before any specific conclusions and generalizations can be drawn about equalization, at least three aspects of equalization must be analyzed: (1) assessment or measure of wealth, (2) program intensity or measure of service, and (3) per pupil expenditure or measure of need and cost. Only through this process can a judgment be made on whether equalization of educational opportunity exists within a given province or state.

Equalization does not, of course, demand standardization of education. The implication is, however, that all school age children have available to them a minimum of educational opportunity, with a relatively uniform effort on the part of the taxpayer. Shalala (1972:40) remarked that: "The fiscal environment in which education occurs must be understood to include (1) differential levels of educational need among districts and (2) the total picture of municipal finance."

To facilitate the establishment of a provincial or state educational equalization scheme, Argue (1942:57) recommended that

> . . . the assessed value of property of one district should be comparable with that of other districts, that is, assessments should be equalized or the ratio of assessed value to true value for each district should be known. If this is not the case, sound equalization schemes are extremely hard to develop -- unless the province [or state] takes over the entire burden of educational finance.

In addition, it is critically important that the operational interpretation of equity or equalization be clearly stated for decisions regarding equity are rarely empirically based but rather are based on value judgments. Furthermore, the definition of equity will dictate, to some degree, the type of equalization formula to be implemented and the subsequent results that are observed.

WEALTH EQUALIZATION MEASURES

This section describes four wealth equalization measures (range, correlation, coefficient of variation, and the Gini coefficient) that are used in this study to determine the extent to which fiscal equalization has been achieved among local school jurisdictions in the Province of Alberta. In addition, inherent value judgments of each of these four measures are briefly discussed.

Range

The simplest way to illustrate the extent of inequity resulting from a given finance plan is through the utilization of the statistical technique called the range. The range is defined as the difference between the highest and the lowest points in the distribution. Therefore, this measure is sensitive to changes in the extremes of the distribution but as pointed out by Berne (1978), these extremes may not be truly representative of the inequality in the distribution. Garms, Guthrie and Pierce (1978:38) illustrated this possibility in their analysis of expenditures per pupil in New York school districts:

> . . . the highest spending district spend $6,327 per pupil and the lowest $1,453. The range is $5,874. However, the second highest spending district spent $4,632 and the second lowest, $1,456. By eliminating only two districts . . . the range has been decreased to $3,176, a 35 percent reduction.

Despite this potential for exaggerating the differences between unrepresentative cases at the extremes, the range continues to be extensively used in school finance analyses.

Correlation

The correlation coefficient measures the direction of a relationship and provides an approximation of the strength of that relationship. Because it does show how variables move together across a given distribution, the correlation coefficient is useful for measuring whether horizontal or vertical equity is being met. For example, in examining taxpayer equity, the correlation between the tax rate (i.e., the supplementary requisition mill rate) and the wealth per pupil will reveal whether wealthier districts paid proportionately lower taxes than poorer districts. If so, then, vertical equity is violated. A correlation of zero between the tax rate and expenditures indicates that equal effort results in equal expenditure.

Coefficient of Variation

The coefficient of variation is given as the standard deviation divided by the mean. This measure takes into account the total population, shows an improvement in equalization when funds are transferred from a rich child to a poor child and is sensitive to equal additive changes in revenue but not equal percentage changes. For these reasons, this measure is widely used in research dealing with disparities among school jurisdictions. As pointed out by Hickrod, Chaudhari and Lundeen (1980:81), "The coefficient of variation takes into consideration all of the variation in expenditures per pupil among districts including both the high and the low spending districts in the distribution."

The measure is also easily interpreted. For example, a value of .20 means one-sixth of the distribution is twenty percent or more above the mean and about one-sixth is at least twenty percent below the mean (Carroll, 1979:29). A diminishing relative variation has been interpreted by Hickrod and Chaudhari (cited in Deiseach, 1974) as a trend towards homogeneity among school districts on the particular variable chosen. The same interpretation will be applied in this study.

Lorenz Curve and the Gini Coefficient

The Lorenz curve (Figure 2.1) graphically shows "the degree of inequality in the distribution of a variable" (Wilensky, 1970:81). To construct the graph, school jurisdictions are first ranked in ascending order according to the fiscal ability or the equalized assessment per pupil of each jurisdiction. The horizontal or x-axis represents the cumulative percentage of students, running from 0 to 100, and the vertical or y-axis is the cumulative percentage of revenue/expenditure, also running from 0 to 100. Under a condition of perfect fiscal equalization, the lowest ten percent of the students would receive ten percent of the revenue/expenditure, the lowest fifty percent would receive fifty percent of revenues/expenditures, and so on (Garms, Guthrie and Pierce, 1978:322).

Though the Lorenz curve provides a useful way of looking at the existing distribution of governmental aid, Bezeau (1979:142) observed that "a Lorenz curve analysis does not always rank distributions unequivocally." Bezeau (1979:142-143)

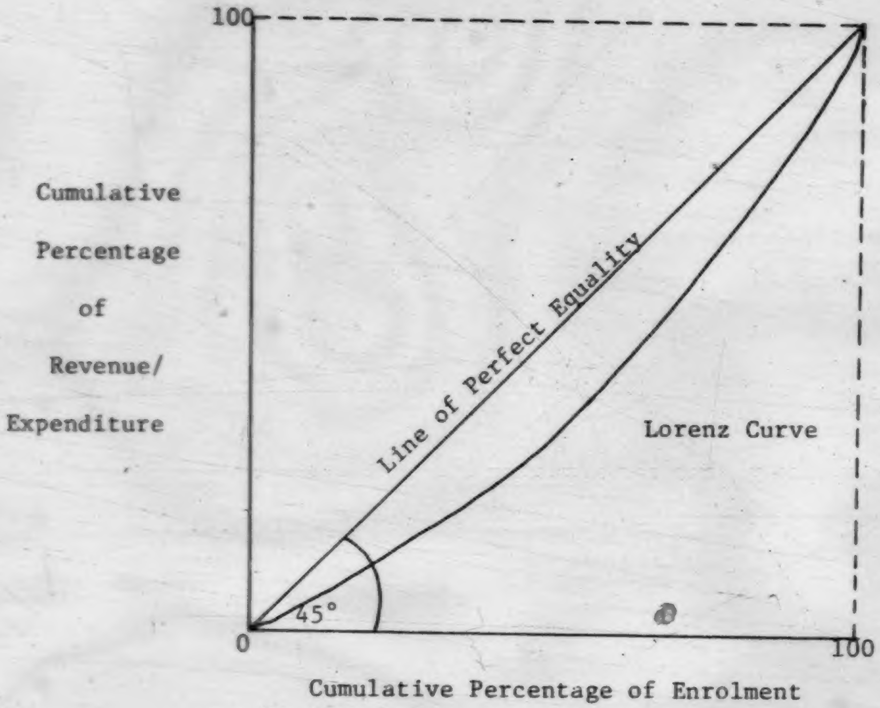
100
Cumulative
Percentage
of
Revenue/
Expenditure
Line of Perfect Equality
Lorenz Curve
45°
0
100
Cumulative Percentage of Enrolment

FIGURE 2.1

THE LORENZ CURVE

illustrated his point through the following example:

> Clearly a curve which is completely inside another curve with respect to the diagonal represents a more equal distribution but the curves may cross. The ranking of distributions represented by crossed curves is ambiguous unless the areas displaced by the curves are brought into consideration.

A non-graphical statistical technique called the Gini coefficient, described in greater detail in the methodology section of the study (p. 76), is used to deal with this potential problem. The Gini coefficient (G) is determined by the ratio of the area between the Lorenz curve and the 45 degree line to the area below the 45 degree line (Berne and Stiefel, 1979a):

$$G = [\sum_{i=1}^{N} \sum_{j=1}^{N} P_i P_j |X_i - X_j|] / [2(\sum_{i=1}^{N} P_i)^2 \overline{X}_p]$$

where P_i is the number of pupils in district i, N is the number of districts, X_i is the average revenues (expenditures) per pupil in district i, and $\overline{X}_p$ is the mean revenues per pupil for all pupils. This coefficient "is unitless, is independent of the mean, obeys the principle of transfers, and is independent of the population size" (Bezeau, 1979:143). But as Atkinson (1970) noted, more weight is given to the centre of the distribution, not necessarily in accord with social values.

There are further limitations to the use of this measure. Grubb and Michelson (1974:55) pointed out that a low Gini coefficient may still describe a non-negligible problem. For instance,

> Although a difference between two districts of $100 per pupil makes only a small difference in a Gini coefficient, it makes a considerable difference when multiplied over a class of 30 (resulting in a difference of $3000 per class) or in a school of 1,500 (giving the school in the richer district an advantage of $150,000).

Secondly, the measure conceals serious disparities between those at the top and those at the bottom. Yet, to measure the deviation of revenues from a condition of fiscal neutrality, Hickrod (1972) and Deiseach (1974) advocated the use of the Gini coefficient or "index of concentration." As explained by Deiseach (1974:22),

> An increase in the gini coefficient from one year to the next indicates a greater departure from fiscal neutrality and an increase in disequalization. The gini coefficients are purely relative, one to the other, and can be used only in comparing the distribution of funds in different years or different distributions in the same year.

Finally, Grubb and Michelson (1974:69) cautioned the interpretation of the Gini coefficients for aggregated data, for whenever data were aggregated existing inequalities tend to be averaged away. Therefore, coefficients of low value would not necessarily imply the existence of little inequality among school systems.

Inherent Value Judgments of Measures

The purpose of this section is to identify inherent value judgments of each of the four wealth equalization measures: (1) range, (2) correlation, (3) coefficient of variation, and (4) the Lorenz curve and the Gini coefficient. The necessity for understanding underlying assumptions was highlighted in the writings of Berne and Stiefel (1979a), Atkinson (1970) and Bezeau (1979). These authors, demonstrated that when evaluating a state's equity over time, the choice of a measure can make a difference. That is, alternative measures may reveal different results from the same data. According to Jordan and McKeown (1980), determining which or how many of the various equity measures to apply in a given situation requires a precise definition of equity, so that what is being measured is known. To assist in the choosing of an appropriate measure, a set of criteria which exposes inherent value judgments of the various measures is needed. A list of such criteria is given in Table 2.1.

It is not the intent to discuss all twelve criteria presented in Table 2.1 but only to highlight the implications of a few. The first criterion, whether the measure shows an improvement when revenues are transferred from a rich child to a poor child, provided the ranking is not reversed, is the most basic of the criteria. As Atkinson (1970) and Bezeau (1979) noted, if a measure fails to meet this criterion it should be rejected as a measure of equality.

The second criterion, whether all children are taken into account, has two aspects. First, the exclusion of any portions of the school system from the measure will bias the results. Secondly, the index used may weight some part of the system more heavily than others, making it highly desirable that the entire population be accounted for.

The seventh criterion deals with the effect of the value of the mean per pupil expenditure on the measure. If a measure is sensitive to the mean, then the lower the mean the lower the degree of inequality registered. However, a lower mean value is not always the result of a change in the distribution; a uniform decrease in values across the range would have a similar effect. Therefore, unless the distribution has in fact changed, a lower mean value does not imply a decrease in any previously observed inequalities.

Criterion eleven, ordinal ranking for comparison purposes, is important for unless one can rank the degree of equality over time or rank it against observations from other provinces or states, the generalizability of results is restricted. As Atkinson (1970) pointed out, one can get different ranking orders depending upon the measure.

Which measure is selected as desirable depends in many ways on the weighting one gives to various questions. However, as noted by Berne and Stiefel (1979a, b), it is an implicit value judgment of the desire for equity in education that equal proportionate changes in revenues will not tend to equalize education equity, although the change in revenue may raise the level of the poorer children. The chosen measures should be insensitive to these types of changes, but should be sensitive to additive changes. As Berne and Stiefel (1979a:21) remarked, "Such change is sometimes seen as promoting equity because children with low original revenues benefit proportionately more than children with high original revenues."

TABLE 2.1

VALUE JUDGMENTS INHERENT IN WEALTH EQUALIZATION MEASURES

Value Judgment Questions[1]	Measures			
	Range	Simple Correlation	Coefficient of Variation	Gini Coefficient
1. Does the measure show an improvement when revenues are transferred from a rich child to a poor child?	No	Perhaps	Yes	Yes
2. Are all children taken into account?	No	Yes	Yes	Yes
3. Is the measure insensitive to equal percentage changes in revenue?	No	Yes	Yes	Yes
4. Is the measure sensitive to equal additive changes in revenue?	No	No	Yes	Yes
5. Is the measure insensitive to equal percentage changes in wealth?	N/A	Yes	N/A	N/A
6. Is the measure sensitive to equal additive changes in wealth?	N/A	No	N/A	N/A
7. Is the measure independent from the value of the mean expenditure per pupil?	No	No	Yes	Yes
8. Is the measure independent from the unit of measurement?	No	Yes	Yes	Yes
9. Is the measure independent from the sample size?	No	Yes	Yes	Yes
10. It is insensitive to which part of the distribution the transfer occurs in?	No	Yes	Yes	No
11. Does the measure allow ordinal ranking for comparison purposes?	No	Yes	Yes	Yes
12. Does the measure allow one to quantify the inequality?	No	No	Yes	No

[1] Sources:
1 – 6 from Berne and Stiefel (1979a,b); 7 – 9 from Bezeau (1979); 10 – 12 from Atkinson (1970).

The research of Berne and Stiefel (1979a) makes it abundantly clear that there are no measurements of school finance equity that do not automatically build in value assumptions. This has led Jordan and McKeown (1980) to contend that the efforts to measure equity should be tailored to the legislative intent rather than applying standards that are inappropriate in terms of governmental policy.

WEALTH EQUALIZATION MODELS

School finance models, as professed by Johns et al. (1972), Johns and Morphet (1975), Johns (1976), and Listokin (1974), have two major dimensions -- allocation and revenue. The "allocation dimension" is concerned with the formula used by governments to allocate funds to local school districts. Variables usually included are: (1) target populations to be served, (2) programs, services and facilities, (3) unit cost of the programs, (4) local ability and/or effort, and (5) requirements and restraints placed on the use of government funds. Within this dimension Johns et al. (1972:288) classified two school finance models: (1) flat grant models where grants are allocated to local school jurisdictions without taking into consideration variations among the taxpaying ability of jurisdictions and (2) equalization models where funds are allocated to local school jurisdictions in inverse proportion to the local taxpaying ability.

The "revenue dimension" relates to sources of school revenue and the types of tax levied by the different levels of government and includes variables which tend to affect the degree of equity achieved by a particular school finance model. Examples of variables that are included in the revenue dimension are: (1) percent of revenues provided from each level of government and (2) progressivity or regressivity of the tax levied.

The extent to which each dimension is reflected in a given school finance plan is however, a reflection of assumptions and value judgments of the government. A discussion of some of the models that may be adopted by a government in either its pure form or a modified form follows. The models identified are: (1) flat grant, (2) foundation plan, (3) percentage equalizing, (4) power equalizing, (5) guaranteed valuation, and (6) full state funding.

Flat Grant

Distributions of funds on a flat grant basis implies that an equal dollar amount per pupil or some other unit of instruction is distributed to every jurisdiction regardless of its wealth (Tanner, Stollar and Tomlinson, 1974; Garms, Guthrie and Pierce, 1978; Pierce, Garms, Guthrie and Kirst, 1975). Mathematically, Grubb and Michelson expressed this concept as $S_i = d(B_i)$, where S_i is state aid to district i, B_i represents the units of instruction in district i, and d is a dollar amount provided for each instuction unit. Under this model, districts are free to raise any amount of local revenue desired above the amount provided by the state.

Although the flat grant does guarantee a specific minimum level of schooling, there are some difficulties inherited by its adoption. For instance, Pierce, Garms, Guthrie and Kirst (1975:26) claimed that allocation of funds through a flat grant was essentially nonequalizing. That is, ". . . the flat grant does help poor districts reach the minimum program level at the required rate, but it does not equalize tax effort, since it is distributed without regard to district wealth."

Because of its neutrality with respect to the wealth of a district, flat grants do not help districts that are eligible for equalization funds, but they do help districts which do not need equalization.

Another difficulty with this type of funding is that there is no hard and fast way of knowing how much education is minimally necessary. Consequently, there is no way to determine the cost of such a scheme. Instead, Garms, Guthrie and Pierce (1978:189) claimed that

> . . . the size of the flat grant is determined by the political process, and, because there are many other demands on the state treasury it is inevitably lower than the level at which even flat grant proponents believe a minimal education can be purchased.

A third problem noted by Garms, Guthrie and Pierce (1978:189) is that the flat grant "typically lacks any consideration of the special need of atypical children."

Fourthly, no account is taken for the fact that it costs more to provide a minimally adequate education in some school districts than in others (Garms, Guthrie and Pierce, 1978:189).

Despite these inherent problems of the flat grant model, Garms, Guthrie and Pierce (1978) saw relatively easy remedies that if invoked would leave the flat grant as a reasonable wealth equalizer as long as one adhered to its implied philosophy.

Foundation Plan

In an attempt to provide greater equalization of school resources than was offered by the flat grant formula, Strayer and Haig put forward the concept of a foundation plan. The foundation plan establishes a basic level of resources which each district is entitled to receive. However, instead of providing the whole of this amount (as under the flat grant), the local district is required to provide a share of the foundation amount, that share being proportional to the district's wealth (Grubb and Michelson, 1974:72). The intent of the foundation plan (Jargowsky, Moskowitz and Sinkin, 1977), then, was to relieve the inequities of fiscal capacity by focusing on the fiscal disparities among school jurisdictions. The program assured a state/provincial defined basic spending level for all districts making an acceptable minimum tax effort. As explained by Corbally (1962:50),

> This means that funds are disbursed to school districts in such a way as to guarantee the funds necessay to provide a minimum desirable program of education to each child without requiring an unfair financial burden of any given group of taxpayers.

Typically, each district is required to tax itself at a certain rate (16.5 mills in Alberta), and the state covers the difference between the foundation level and the local share. Grubb and Michelson (1974:72) presented the following general formula for use:

$$S_i = d(B_i) - k(W_i)$$

where W_i is an index of local wealth and k is a parameter which determines the amount of the local share, given local wealth W_i. The foundation amount is $d(B_i)$ and the local share is $k(W_i)$.

The trouble with most foundation plans, as reported by Ornstein (1978:342), is that they

> . . . do not provide enough funds to pay for what would be considered even a minimum level of education; the level is so low that there is generally a need to exceed it, and the wealthier the district, the easier the task of raising the expenditure level.

Nevertheless, most provinces in Canada operate a foundation plan and as of 1977 – 1978 about sixty percent of the states (Ornstein, 1978:342) in the United States utilized this approach to finance education.

Percentage Equalizing

Updegraff (cited in Johns, 1973:21), the originator of the concept of percentage equalizing, suggested that

> . . . state funds be allocated to local school districts in inverse relationship to the valuation of property per unit of educational needs but in direct relationship to the local tax effort made by a district in proportion to its taxpaying ability.

In other words, he proposed that districts of less wealth be apportioned more state funds per unit of need than districts of greater wealth but that any district could receive more state funds by increasing its local tax effort. The philosophical base of the plan was described by Garms, Guthrie and Pierce (1978:193) in the following manner: "Percentage equalizing . . . defines equity as access to education on the same terms, and it also holds that the amount of education to be purchased by a community should be determined by that community." Thus, the percentage equalizing formula stressed local dominance in expenditure decisions (Jargowsky, Moskowitz and Sinkin, 1977) yet at the same time was designed to ameliorate the unequal distribution of education resources produced by autonomous local districts (Grubb and Michelson, 1974); a characteristic that runs counter to the theoretical operation of the formula.

Van Fleet and Boardman (1971:309) pointed out that "the amount of funds expended from the nonequalizing revenue sources tends to lessen the impact of revenue equalization programs where they do exist." Strayer (cited in Johns, 1973:22) also argued that "reward for effort was inconsistent with equalization of educational opportunity." Yet, Garms, Guthrie and Pierce (1978:195) claimed the percentage equalizing model "makes all districts equally able to raise tax revenues, that is, a mill on the tax rate, combined with state aid, will raise the same amount in each district." The level of support is directly dependent upon the local tax effort, the implication being that financial resources are equalized only when all districts make the same local tax effort.

Keeping in mind the possible shortcomings of the percentage equalizing formula, the prime feature remains as one whereby the state supports a share of the locally determined school expenditures in a given school system (Burkhead, 1964; Jargowsky, Moskowitz and Sinkin, 1977; Garms, Guthrie and Pierce, 1978; Johns and Alexander, 1971a). Mathematically, the formula may be expressed as:

$$SA = [1 - k(D/S)]c$$

where SA is state aid, k is local percentage of educational expenditures (predetermined constant factor), D is the equalized value of property per pupil in the district, S is the state average equalized value of property per pupil, and c is the total dollar cost of the program to be financed (Garvue, 1969), the cost of the foundation program (Johns and Alexander, 1971a), the total educational revenue per pupil in a given district (Grubb and Michelson, 1974). Despite its seeming complexity, this formula gives exactly the same result as the Strayer–Haig formula when applied to measures of need based on weighted pupils or adjusted instruction units for any given level of foundation program (Johns and Alexander, 1971a:283).

Power Equalizing

The power equalizing model was popularized by Coons, Clune and Sugarman (1970:201) with a claim that "for a system of local public school finance to be free of wealth determinants it must be fully equalizing of the power to raise educational dollars." Under power equalization, "expenditure levels depend on the locally selected tax rate but are independent of the size of the local tax base" (Beck, 1979:56). Therefore, a negative relationship exists between state aid and the local property value per pupil. The general procedure followed in the allocation of funds is for the state to establish a schedule of tax rates, with an amount per pupil guaranteed to a district for each level of tax. Thus, a pure power equalization formula ". . . guarantees no . . . minimum and . . . would impose negative aide on very wealthy districts, requiring them to contribute a share of local property tax revenues to the state school aid fund" (Beck, 1979:55). Theoretically, then, the power equalizing model has no set maximum on local effort. Perhaps for this reason and the possible resulting drain on the revenue of governments, Johns and Morphet (1975) observed that no state at that time used the model in its pure form.

The fact that the power equalizing plan focuses on the effort factor is reflected in its formula --

$$S_i = t_i(k - W_i)$$

where S_i is the state aid to district i, t_i is the tax rate for district i, k is a predetermined constant set by the legislature or a delegated authority, and W_i is the wealth of district i. The state would then collect from the district the excess of revenues raised over $t_i(k)$.

Guaranteed Valuation

The guaranteed valuation plan focuses on the fiscal capacity of local school districts. However, rather than specifying a percentage of state support, Jargowsky, Moskowitz and Sinkin (1977) and Johns and Morphet (1975) suggested that each district be guaranteed a defined property valuation. Thus, the model provides each district "the difference between the yield of a given tax levy on the valuation per pupil or per teacher unit that the state has previously guaranteed for the state" (Johns and Morphet, 1975:223).

Full State Funding

The full state funding model was first espoused by Morrison in 1930, the basic assumption being that the quality of a child's education should not depend on the willingness of his/her community to tax itself to support education (Phelps and Jones, 1972:103). As observed by Garms, Guthrie and Pierce (1978), this model permits no geographical variation in school expenditure.

> It does not, however, preclude adjustments for differing educational needs or differences in the cost of producing education of equivalent quality. It does mean that, other things being equal, students will be recipients of equal monetary provision. The only means by which this can be accomplished operationally is for the state to mandate the expenditure level, the equity demands that the expenditures be supported by statewide taxation (Garms, Guthrie and Pierce, 1978:199-200).

Full state funding, however, does not necessarily imply state operation of the schools, but merely state guarantee of equal amounts of money per pupil to each district. Therefore, a true full state funding plan implies that all educational funds are raised by statewide taxes (which could include property taxes) and the money would be spent equally on similarly situated students.

Discussion

Jargowsky, Moskowitz and Sinkin (1977) observed that with the exception of flat grant and full state funding models, the remaining wealth equalization models are based on the same components, namely, tax effort, tax yield and wealth. Yet, the part of equalization highlighted by the various models is divergence. For example, percentage equalizing highlights the state share, the foundation program highlights the guaranteed expenditure level, guaranteed value highlights the state guaranteed valuation, and the power equalizing highlights the effort factor. Furthermore, each of these models are cost-shared formulas, with contributions coming from both the state/provincial and local sources.

The relationship between the models is shown in Figure 2.2. As one moves outward from the centre of the figure, a more encompassing equalization model prevails. For instance, the flat grant is a special case of the foundation plan which in turn is a percentage equalizing model modified such that a ceiling is placed on the level of governmental support. The full state funding plan, on the other hand, is a limiting position on each of the other five plans.

Examining the effects of the various models, Grubb and Michelson (1974) and Tanner, Stoller and Tomlinson (1974) reached the conclusion that there is no optimal school finance formula or model. Instead, their findings, among others, suggested that increasing support is a much more reasonable direction in which to look for equalization. The implication is that the extent to which financial resources for education are equalized is not a function of the type of plan used so much as the content of the plan and the

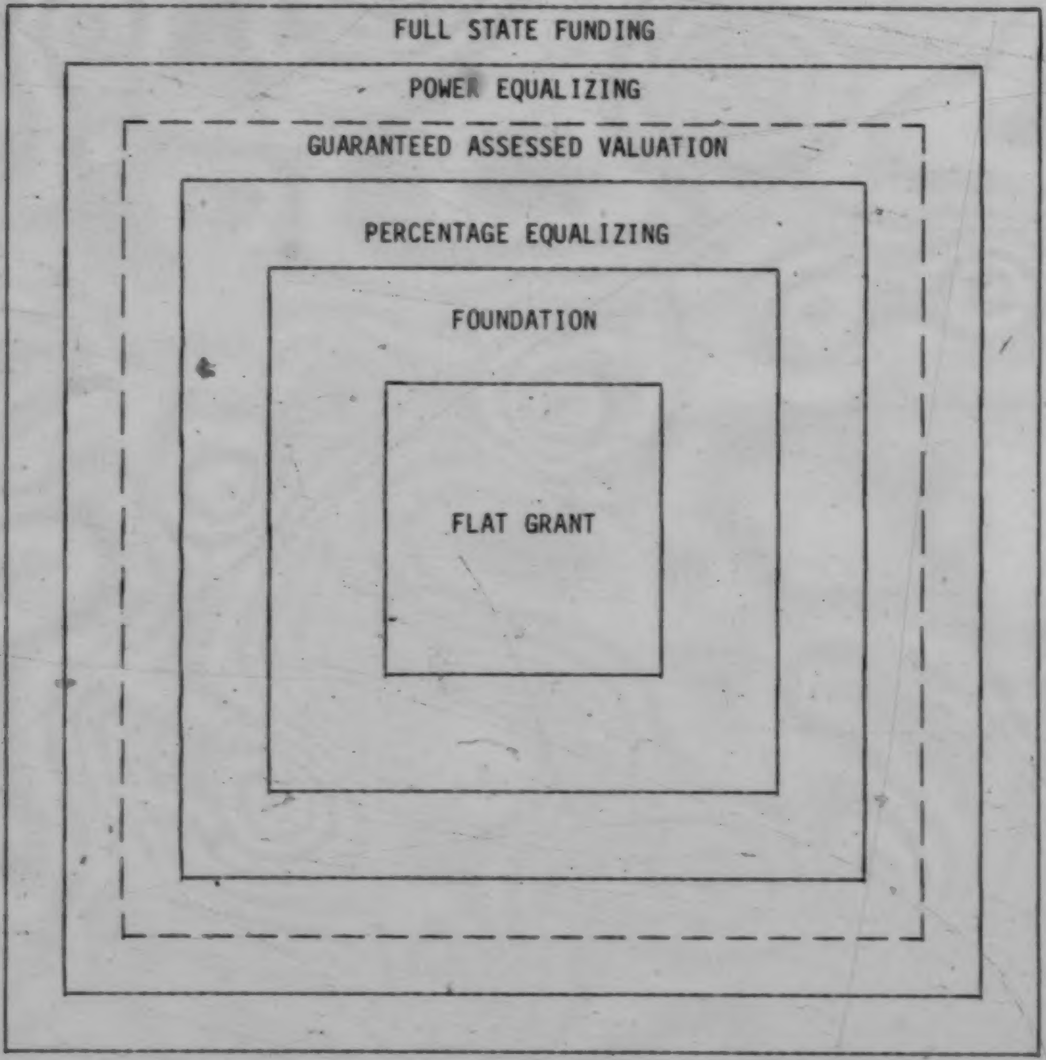
FULL STATE FUNDING
POWER EQUALIZING
GUARANTEED ASSESSED VALUATION
PERCENTAGE EQUALIZING
FOUNDATION
FLAT GRANT

FIGURE 2.2

WEALTH EQUALIZATION MODELS

extent to which it is financed (Johns and Salmon, 1979; Coons, Clune and Sugarman, 1970). As stated by Gilmer (1973:115-116), "The final choice of an aid plan depends largely on the goals of the program and the political philosophy of those who design it. Welfare criteria finally prevail."

SUMMARY

This chapter has reviewed the literature relevant to the concept of equity by way of its meaning and composition. Several viewpoints exist as to the characteristics of an equitable finance plan. Furthermore, each component of equity in and of itself was found to lack consensus among researchers and writers as to its meaning and constitution. Finally, because the focus of the present study is fiscal equalization, measures and models used for the investigation of this component of equity were discussed.

CHAPTER 3

STATE AND PROVINCIAL FINANCIAL REFORM

In the preceding chapter the concept of financial equalization was discussed essentially from a theoretical perspective. The purpose of this chapter is to illustrate how these ideas have been applied by various state and provincial governments to their respective school jurisdictions. The intent is to give an overview of financial reform in education both in the United States and Canada. Finally, a look at the Alberta grant scheme in so far as fiscal equalization is addressed is presented.

Because of the political problems facing full-state funding of education (e.g., the restriction on local option for additional revenues for enrichment programs), most reform proposals work under the assumption that a state/provincial-local partnership in the financing of education will continue (Cohen, Levin and Beaver, 1973). Exceptions to this state of affairs are seen in the state of Hawaii and the provinces of Newfoundland, Prince Edward Island, and New Brunswick where there is no cost-shared relationship. Thus, if legislatures want a financial plan that will sufficiently finance education, provision must be made for the orderly examination of the principles that determine the optimum level and the composition of government revenue and expenditures.

Principles of a Finance Plan

In another context, this researcher identified six basic principles that an educational finance plan needs to satisfy -- political feasibility, equity, efficiency, adequacy, ability, and stability (Jefferson, 1980c). These principles are essentially interdependent and it is their joint operation which determines the quality of a system of educational finance. An example of a possible conflict, as outlined by Argue (1942), is one must decide how far the demands of equalization, with its leanings towards uniformity, are to be considered in the face of the demands for adaptability, with its leanings towards diversity and its insistence on local initiative. The interdependency of these principles is illustrated in Figure 3.1. As indicated in this figure, the principle of

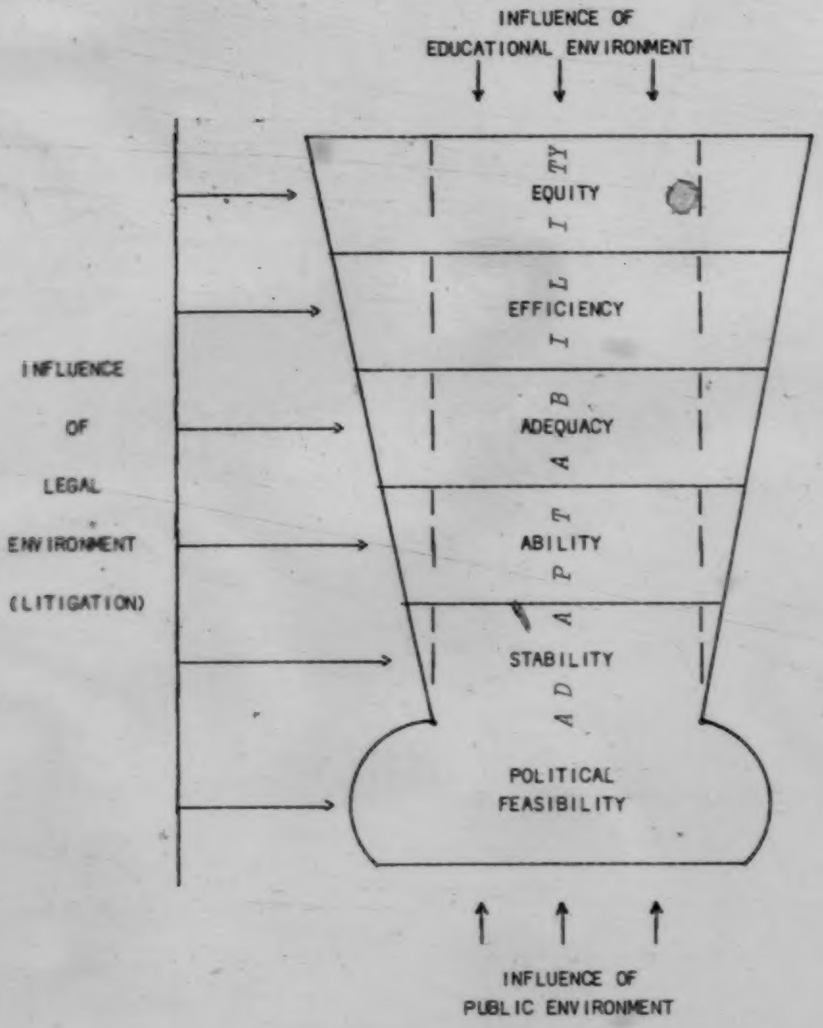
INFLUENCE OF
EDUCATIONAL ENVIRONMENT
EQUITY
EFFICIENCY
ADEQUACY
ABILITY
STABILITY
POLITICAL
FEASIBILITY
ADAPTABILITY
INFLUENCE
OF
LEGAL
ENVIRONMENT
(LITIGATION)
INFLUENCE OF
PUBLIC ENVIRONMENT

FIGURE 3.1

A PARADIGM OF PRINCIPLES FOR AN EDUCATION FINANCE PLAN

political feasibility forms the base of the financial paradigm indicating that an education finance plan is a function of the willingness of the public to support the structure.

An element based in political feasibility but functionally operative in the remaining principles is adaptability. In the absence of adaptability and looking at efficiency a "bureaucratic" structure unable to effectively meet its original intent would result.

Together with the above, a financial plan must also contend with educational and legal environmental factors; each of these factors having the power to shift the relationships among the six principles at any time. In light of these intervening factors, the minimum requirements of the equity, efficiency, adequacy, ability, and stability principles are indicated below.

Equity should provide fiscal, program, and service equality. Thus, the equitable financing of public schools would imply a commitment to (a) equal educational opportunity for all children, (b) maximum effective use of every tax dollar expended for public education, and (c) equal sharing of the tax burden by all taxpayers. Efficiency implies the necessity for assessment of administrative quality in the distribution of resources and therefore the utilization of modern technology. Adequacy implies the availability of resources with provision for responsiveness to demand, that is, provision must be made for local fiscal autonomy though provincial/state responsibility remains intact. The question arises as to whether the province or state could make adequate provision for educational needs if the desire and effort were present. According to Norton and Norton (1938:11) two factors must be considered: "... first, the resources which it possesses as a basis for the support of public enterprises of which education is one; and second, the size of its educational task, load or need as indicated by the number of children to be educated." In other words, ability to finance education is the quotient between resources (or the general public financial ability) and the educational need. Accordingly, the final two principles, ability and stability, must be considered with reference to cost and population involved.

STATE AND PROVINCIAL EQUALIZATION REFORM EFFORTS

The disparities in wealth among local school jurisdictions have prompted state and provincial authorities to develop various finance plans to assist the poorer jurisdictions (Lawton, 1979:9–10). Notwithstanding this move, Harrison (1976:44) cautioned that reform is not inevitable,

> ... just because people know that extreme differences in public school expenditures exist, and that there are policies available designed to minimize them. Those policies may not work. They may simply make a bad situation worse. Good intentions do not necessarily guarantee reliable results.

With this in mind, attempts by governments within the United States and Canada to achieve a greater degree of financial equity among their school jurisdictions are reviewed.

The American Scene

Most states, according to Cohn (1974:26), have programs of financial assistance to school jurisdictions which are labelled "equalizing" though they vary greatly in their effect. This depends, in part, on the following factors: (1) consideration of educational needs, (2) absolute number of dollars devoted to equalization, (3) the existence of flat, general, and/or categorical grants, and (4) encumbering ceiling, minimum, and save–harmless provisions (i.e., no school system receives funding at a level lower than the previous year).

The state of Kentucky, for example, adopted a percentage equalization program whereby an equalization fund was established, "... which would equalize revenue produced on a five–cent levy on a per pupil basis for all districts to the amount which a five–cent tax rate would produce on a per pupil basis in the wealthiest county school district" (Guess, 1978:447). That is, using the wealthest county school district as the base, revenue generated from a local mill rate of five–cent per pupil was equalized by the state. The result of this program was to effectively penalize, by non–participation, those school districts unable to meet the specified requirements due to their fiscal ability. The actual and projected number of districts in this situation as reported by Guess (1978:447) was:

> There are approximately twenty-five school districts which will have less than the full ten-cent rate required for participation in 1979, and fifty districts which will have less than the fifteen-cent rate required for participation in 1980. Fiscal 1978 saw five districts unable to fully participate in the five cents supported.

In comparison, Rhode Island which also implemented a "percentage equalizing reimbursement formula" did not find district wealth to be a major factor in the determination of a school district's effort or of the support taxpayers were willing to provide. Instead, the dominant factor appeared to be the district's commitment to education. This result tends to be consistent with the intent of the program which in the perception of Ward (1978:503) was and still is "to 'equalize the ability to pay' for all of the state's forty school districts and to leave to the local districts the decision on the level of educational expenditures."

The "how" rather than the "how much" appears to act as the key variable in addressing the problems of fiscal imbalance between rich and poor school systems. Following is a "snapshot" look at attempts by state governments to contend with this prevailing difficulty.

Nebraska. The state of Nebraska attempted to "neutralize the financial effects of local differences in yield from qualifying levies due to unequal tax bases" (Hudson, 1978:479) by the implementation of a Strayer-Haig-Mort type of formula. The success of this effort was summed by Hudson (1978:486) as he stated: "If tax equity for schools exists in Nebraska, it is by accident."

South Carolina. The state of South Carolina attempted to achieve a greater degree of equity among its school jurisdictions by containing within its financial plan a guaranteed funding level for each pupil in the public schools. In so doing, however, Kelly (1978:522) noted three provisions which would prove to be counterproductive to the attainment of fiscal neutrality. The noted provisions were: (1) The plan allows an unlimited leeway option for individual jurisdictions. If the wealthy jurisdictions opt for more leeway, inequity will be created in the system.; (2) The plan is designed not to reduce the level of state support in any jurisdiction. "Projections of the impact . . . for a five-year period indicate that some districts will still be receiving funds under the hold harmless provision" (Kelly, 1978:522).; and (3) The current mechanism distributes a flat amount per pupil without taking into consideration need or local fiscal capacity of the jurisdiction.

Minnesota. According to Lovett and Mueller (1978:462), the state of Minnesota recognized "a number of cost differentials pertaining to variations in program costs due to general descriptions of the student population," the result being a relative success in providing school tax neutrality for property taxpayers.

Pennsylvania. In Pennsylvania the school finance system separated funding provisions for the treatment of educational problems that are related to demographic variables (Harris, 1978). However, very little progress was made towards the achievement of fiscal neutrality.

Comparison of States. James (1961) using a sample of five states (Washington, California, New Jersey, Wisconsin, and Nebraska) and 316 jurisdictions within these states found no consistent reduction in the amount of variability in property tax rates in states having a high level of support. Two partial explanations for this finding proposed by James (1961:38) were: (1) aspirations of the jurisdiction's citizens towards the support of education, and (2) equalizing rather than assessed valuations were used in the analysis ignoring the fact that two of the five states used assessed valuations when allocating funds.

Barkin (1967:20) in comparing the state aid programs in Kentucky, Missouri, and Tennessee concluded that, "... the basic reasons for the differences in the three programs lie in the proportion of the educational program which must be financed locally and the share of state aid distributed without regard to economic ability." His analysis of the programs revealed that, "without exception, smaller amounts of state aid were distributed with less equalization effect in urban areas than in rural parts of the states under all three programs" (p. 18).

Carroll (1979), after reviewing financial reforms in the states of California, Kansas, Michigan, New Mexico, and Florida, reported that each state appeared to have assumed a "leveling-up" approach to equalization. That is to say, each state chose to increase state educational aid, attempting thereby to raise lower-spending jurisdictions' revenues without significantly reducing the revenue of high-spending jurisdictions. The results of this approach in each of the five states were:

1. California -- Moderate success was achieved in reducing disparities in the distributions of revenues per pupil.

2. Kansas -- Disparities in the distributions of revenues declined 5 to 10 percent among the small- and meduim-sized districts and 15 to 20 percent among the large districts.

3. Michigan -- Revenue disparities remained about the same following reform, but disparities in tax rates declined substantially.

4. New Mexico -- Reform has not affected disparities in local and state revenues per pupil and in instructional expenditures per pupil.

5. Florida -- Reform has increased disparities in revenues per pupil and in instructional expenditures per pupil.

In summary, the consequence of reform is dependent upon the characteristics of the state in which it is to be implemented. This conclusion is exemplified in the following observation made by Beck (1979:72):

> The Michigan evidence . . . indicates that a power equalization formula with recapture and with an income adjustment may substantially achieve the objective of making education expenditures independent of the wealth of the local school district. The Rhode Island results suggest that recapture -- or even the elimination of the minimum aid guarantee in that state's formula -- would reduce inequity in expenditure associated with differences in the size of the tax base. But the Rhode Island results do not show as complete a reduction in this inequality as did the Michigan study. This may be attributed to the lower estimated "price" elasticity in the Rhode Island case.

In addition, Odden (1978:471) reported that a "stimulation of reform demonstrated that a revised school finance structure can be fiscally neutral without reducing expenditure disparities."

The Canadian Scene

The Canadian educational finance systems were viewed by the Canadian Teachers' Federation (1981:2) as the product of two nationally held beliefs:

> The underlying purpose of school finance arrangements in Canada, whether explicit or implicit, is to allocate funds in direct relation to the distribution of educational needs. A secondary purpose in provinces with provincial-local funding is to preserve and/or foster local initiative and equalize local tax burdens.

These purposes are achieved either by a provincial-local sharing of responsibility for financing the basic school operations or by provincewide financing with provision for supplementary local funding above the basic program. The provincial choice between these two approaches across the nation is illustrated below.

Western Provinces. The western provinces of Canada (British Columbia, Alberta, Saskatchewan and Manitoba) have all adopted the cost-shared approach to finance education, however, the implementation of such an approach varies among the provinces. British Columbia and Saskatchewan have adopted a guaranteed revenue base program; though the details of the two plans vary. Alberta, on the other hand, has adopted a foundation equalization approach complemented by a supplementary equalization program.

> The School Foundation Program Fund is financed by an annual appropriation of the Legislature and by a 21.5 mill levy on the equalized assessment of corporate property for 1980. The Legislative appropriation was 85% and the corporate tax levy provided the remaining 15% (CTF, 1981:6).

The Supplementary Requisition Equalization Grant provided a further $21.3 million [21.3 mills on divisions and counties plus 18.3 mills on urban school jurisdictions] in 1980 to allow for some equalization of assessed property value (CTF, 1981:9).

The province of Manitoba is the only province in Canada that has experienced a major revision in its system of financing education. Effective in 1981, the foundation program which supported the school jurisdictions of this province since 1967 was replaced by the Education Support Program.

> The new Program will have a term of three years at the end of which it is expected that enrolment will be more stabilized and the kind of financial support system required in Manitoba may require further adjustments or revisions . . . . Among its major features, the new program will retain the foundation program concept, cover the major portion of school board spending, increase the degree of equalization over the entire system, increase the level of support from the general revenue of the Province to approximately 80 per cent, resulting in a shift from taxation on real property, and provide safeguards against revenue loss because of declining enrolments (CTF, 1981:2).

Eastern Provinces. As in the western provinces, provincial-local cost sharing prevails in Quebec and Ontario, both provinces having adopted a guaranteed revenue base program to fund education. This approach comes very close to being a foundation program since the provincial governments have placed ceilings on the size of the per pupil grants they will make to school jurisdictions. The 1980 adopted formulas for each province are as follows (CTF, 1981:2-3):

> *Quebec*: Equalization grants = authorized expenditures - (local levy + provincial statutory grants + other revenues)
>
> *Ontario*: General legislative grants = recognized ordinary expenditure - local levy

Maritime Provinces. In the maritime provinces, provincial-local cost sharing is prevalent only in Nova Scotia. Provincewide financing is used in Newfoundland, Prince Edward Island and New Brunswick. Supplementary local levies are possible in these three provinces but are rarely used. The Economic Bulletin produced by the Canadian Teachers' Federation in February, 1981 described each of these four provinces' equalization approaches in the following manner:

> *Newfoundland* -- The provincial government bears virtually all costs of education.
>
> *Prince Edward Island* -- The Province provides total funding from its general revenue for the foundation program.
>
> *Nova Scotia* -- The cost of the foundation program is shared between the Province and the municipalities. The "municipal proportion" of the cost may reach a maximum of 72.5% of the full cost of the foundation program whereas the "provincial proportion" can be no less than 27.5%.
>
> *New Brunswick* -- The provincial government finances all approved costs of elementary and secondary education with revenues from provincial income and sales taxes which constitute the consolidated fund.

Thus, the Newfoundland, Prince Edward Island and New Brunswick governments have effectively set the foundation level at 100 percent of budgeted expenditures, that is, they have assumed full state funding of elementary and secondary education, and they utilize the property tax as a provincial tax (Lawton, 1979:10).

In the end, the principle of equity is strictly a value judgment and there are wide differences of opinion as to what approach should be adopted in its attainment. This diversity of opinion was partly revealed in the above review of state and provincial educational finance plans and reforms. The comparative success of these state and provincial reforms was examined by Lawton in 1979.

Lawton (1979:11) in determining within state/province disparity for 1975 found that:

> The mean coefficient for variation for the fifty states was .17 in 1975, whereas the average for the five Canadian provinces [Prince Edward Island, Newfoundland, New Brunswick, Ontario and Nova Scotia] was .09. In short, there was far greater equity within the Canadian provinces, on the average, than within the United States.

The progressiveness of the Canadian provinces was further related by Lawton (1979:13) as he commented:

> Canadian provinces have also been more effective in decreasing disparity. In 1970 their average coefficient of variation was .12; thus, it decreased 25 percent between then and 1975 when the average value was .09. Brown et al. report that the average coefficient of variation for the United States was .17; thus, it did not decrease at all during the next five years.

Discussion

As seen in the overview of state and provincial educational financial support systems, aid to local school jurisdictions tends to be motivated by (1) the intention to relieve the burden of local school taxes, usually the unpopular property tax, or (2) the desire to increase education opportunities by raising the spending level in low expenditure jurisdictions. In reference to the first motivator, it is interesting to note that while the concept of "equalized assessment" for property tax purposes is infrequently recognized in the United States, Canadian provinces have for some time recognized this basic aspect of school finance.

Despite the obvious intent of the state and provincial legislatures to achieve a greater degree of equity among their school jurisdictions, they have lessened the impact by the intentional or otherwise introduction of certain variables. Three variables that exemplify this situation are:

1. Although a minimum expenditure per pupil has been legislated in the various states and provinces, no legislative assembly has set a ceiling on maximum expenditures. As a result, there is a great variation in expenditure not only from one state/province to another but also among the school systems within each state/province. (The exceptions to this situation are seen in those regions that have adopted a full-state funding plan.)

2. The loss of students and the effects of inflation on property valuations will tend to move any state or province away from equity goals. As stated by Hickrod, Chaudhari and Hubbard (1979:22-23):

> This "slippage" will take place unless the state [or province] takes continual legislative action to attain equity goals. It is also possible that a continual court pressure is necessary to keep the state legislature moving in the direction of equity goals, in which case waves of Serrano-type decisions would be needed.

3. The save-harmless provision common to most financial plans is possibly the most limiting factor to any attempt at equalization. Perhaps the main reason for this effect is that the save-harmless provision places restraints on making fundamental changes in the formula because it automatically predetermines where a considerable

proportion of the monies will be placed. Thus, aid received by a jurisdiction is not related to its fiscal or educational need but rather to the aid it had previously received.

EQUITY AND THE ALBERTA GRANT SCHEME

This section discusses the rationale behind each of eight categorical grants as well as the school foundation fund established by the Government of Alberta in support of its local school jurisdictions and presents an overview of their governing regulations.

CATEGORICAL GRANTS

Since 1974, the Alberta Schools Grants Orders has been periodically amended to accommodate the introduction of a number of grants for the purpose of interdistrict equalization of operational costs. To date the number of grants designated for this purpose is eight (Table 3.1). With regards to the first five of these grants, the government initiates action to ensure that all qualifying jurisdictions are allotted their respective grant amounts; this is not the case for the latter three. Special application to the provincial government by a school jurisdiction is necessary for that jurisdiction to be considered for the Location Allowance Grant, the Private School Opening Grant and/or the Incremental Grant. If a given school jurisdiction is found to be eligible for a grant funds are subsequently forwarded to the jurisdiction. Should a school jurisdiction which would normally have received such funding neglect to submit the proper grant claim form, no grant is allocated. However, the government will reimburse the jurisdiction if the omission is brought to their attention and the required documentation supplied by the school jurisdiction in question (Baron, 1981). This provision for reimbursement of funds applies only for the preceding government fiscal year.

The rationale for each of these eight categorical grants as well as their governing regulations since their introduction into the Alberta Grants Order is described below.

TABLE 3.1

LISTING OF ALBERTA CATEGORICAL GRANTS OPERATIVE IN 1980

1. Supplementary Requisition Equalization Grant (S.R.E.G.)
2. Declining Enrolment Grant
3. Small School Assistance Grant
4. Small School Jurisdiction Grant
5. Corporate Assessment Grant
6. Location Allowance Grant
   (includes an isolation and teaching housing unit component)
7. Private School Opening Grant
8. Incremental Grant

Supplementary Requisition Equalization Grant

The Supplementary Requisition Equalization Grant (S.R.E.G.) was introduced in 1975 to provide a system of funding which would recognize the existing disparity between school jurisdictions with respect to their property tax bases. The method used to alleviate the disparity is direct grants to school boards with low property assessment in order to reduce the level of school tax requisition on property owners. The amount of the grant varies with the number of resident pupils in the school system and in relation to how low the assessment per pupil is within the school system.

Regulations. To qualify for a S.R.E. Grant, a board must have existed as a board of a school district or school division during the school year prior to the qualifying year. Notwithstanding this regulation, the Minister of Education may order that a grant be paid but the amount of the grant payable shall be reduced in proportion to the number of months during the given year that the school district or division was not in existence.

The mill rate and per pupil amount set for the years 1975, 1978 to 1980 are presented in Table 3.2. As indicated by this table, 1980 was the first year in which a distinction was made in the net mill rate for the qualifying rural and urban school jurisdictions.

TABLE 3.2

NET MILL RATE AND/PER PUPIL RATE FOR S.R.E.G. IN THE YEARS 1975, 1978 TO 1980

	1975	1978	1979	1980
Net Mill Rate	10.0	13.2	14.3	21.3 (Rural[1]) 18.3 (Urban)
Per Pupil Rate	$145.00	$211.20	$257.40	$384.30

[1]Rural includes all divisions and counties

In 1979, a new regulation was introduced specifying the extent to which the S.R.E. Grant could be reduced annually for any given jurisdiction. The regulation, in essence, guaranteed each jurisdiction at least eighty percent of their 1978 grant allocation.

Declining Enrolment Grant

In 1975, the provincial government introduced the Declining Enrolment Grant (D.E.G.) to provide compensation to school jurisdictions experiencing a reduction in their eligible pupil enrolment. At the time of this study, declining enrolment grants are paid to boards which have an enrolment decline of at least one percent over the prior two years. For each pupil lost in excess of the one percent decline a per pupil amount is paid, with this amount being larger for school boards with small total enrolments.

Regulations. At the time the Declining Enrolment Grant was introduced, the compilation of the percentage of decline was based on the average decline over the three years prior to the qualifying year. The formula used to determine the amount to be allocated to a board had the stipulation that the percentage decline must be in excess of 2.44 percent before any grant would be paid (Table 3.3).

TABLE 3.3

DECLINING ENROLMENT GRANT PER 1975 - 1977 REGULATIONS

Average Percent Decline	Dollars Per Pupil Lost
2.44% or less	$ 0
2.45% - 3.99%	140
4.00% - 5.49%	280
5.50% - 6.99%	420
7.00% or greater	560

This formula remained in existence until 1978 at which time two methods of fund allocation to boards suffering a decline in pupil enrolment were utilized at the discretion of the government. Whichever method yielded the greatest grant for a jurisdiction was the one adopted for that particular school jurisdiction. One method constituted a continuation of the old formula (Table 3.3) with its only criterion being "percent decline." The alternative method involved the calculation of a board's declining enrolment grant by means of a new formula (Table 3.4) using the criteria of "percent decline" and "eligible enrolment." In this case, the percent of decline had to be in excess of one percent over two years rather than 2.44 percent over three years. The second formula was uniformly applied in 1979 and 1980. In each of these years, the "Y" portion of the formula was adjusted upward by an escalation factor.

TABLE 3.4

DECLINING ENROLMENT GRANT -- NEW FORMULA (1978)

Grant_{1978} = $(X_{1978})(Y_{1978})$, where percentage decline $\geq 1\%$

= 0 ,where percentage decline $< 1\%$

X_{1978} = (1976 Enrol. − 1977 Enrol.) − [1976 Enrol. / 100]

= Percentage Decline

Y_{1978} : Subject to Eligible Enrolment (N_{1976})

N_{1976}	N_{1978}
0 − 1000	\$950 − \$.35 N
1001 − 5000	\$600 − \$.075 N
5001 or greater	\$300

Small School Assistance Grant

In 1974, the Small School Assistance Grant was introduced by the Government of Alberta as a means of providing assistance to those school jurisdictions with enrolments of fewer than 6,000 students and one or more small schools. These same criteria continued in use in the year 1980. The general method utilized by the government to provide aid for the operation of small schools was that of direct grants to the school boards of small school systems.

Regulations. In order to qualify for a Small School Assistance Grant, a board is required to have a total eligible enrolment of fewer than 6,000 pupils. Other conditions that must be satisfied and the formulae used for the allocation of funds are provided in Table 3.5.

If a school offers more than one level of instruction (elementary, junior high, senior high) the grant criteria are applied separately to each level. For small schools which offer instruction in both English and another language, each language group in that school is considered as an individual small school for the purpose of applying the eligibility criteria of the Small School Assistance Grant. In 1980, the basic grant per eligible level in each small school was $2850 with adjustments made according to the relationship between the number of pupils enrolled at the elementary, junior high, and senior high level and a base number for each level (e.g., at the elementary level the base number is 10 pupils).

Small School Jurisdiction Grant

From 1973 to 1978, inclusive, assistance was provided to school jurisdictions with small enrolments in the form of a Superintendency Grant. This grant provided, through direct grants to school boards, funds to support the joint employment of a superintendent by school boards of districts with small enrolments. On February 9, 1979, Julian Koziak, then Minister of Education, announced the replacement of the Superintendency Grant by the Small School Jurisdiction Grant. The immediate effect of this change was the broadening of the base of the grant. The Small School Jurisdiction Grant provided, through direct grants to school boards, assistance to those school jurisdictions with an enrolment of fewer than 1500 pupils.

TABLE 3.5

SMALL SCHOOL ASSISTANCE GRANT PER 1974 - 1980 REGULATIONS

Year	Conditions[1]	Amount or Applicable Formula[1]
1974 - 76	1 - 4 pupils/grade	$100 per pupil
	5 - 10 pupils/grade	$ 75 per pupil
1977	$10 < N < 20$ pupils/grade	$[\$1500 + (\$50 \times N)] \times [2 - R/10]$
	1 - 10 pupils/grade	$\$1500 + (\$50 \times N)$
1978	$m \leq N < 2m$	$[\$2400 + (\$70 \times N)] \times [2 - R/m]$
	$N < m$	$\$2400 + (\$70 \times N)$
1979	$m \leq N < 2m$	$[\$2600 + (\$75 \times N)] \times [2 - R/m]$
	$N < m$	$\$2600 + (\$75 \times N)$
1980	$m \leq N < 2m$	$[\$2850 + (\$85 \times N)] \times [2 - R/m]$
	$N < m$	$\$2850 + (\$85 \times N)$

[1] N is the number of pupils enrolled at a given level (elementary, junior high, senior high)
R is the eligible enrolment per grade at a given level
m is the number 10 at the elementary level, the number 13 at the junior high level, and the number 15 at the senior high level

Regulations. From 1973 to 1978 the money allotted to local school jurisdictions was done under the regulations of the Superintendency Grant. Since then, allocation of funds has been subject to the regulations of the Small School Jurisdiction Grant (Table 3.6).

In 1980, the basic grant for jurisdictions with an enrolment of less than 500 was $1400 plus $37.70 per pupil. An enrolment between 500 and 1500 pupils qualified the jurisdiction for a grant of $30,375 minus $20.25 per pupil.

Corporate Assessment Grant

The Corporate Assessment Grant was introduced in 1980 to lessen the financial impact on those boards who would no longer receive all funds generated from undeclared corporate assessment.

Regulations. A corporate assessment grant is paid to a board in respect of its corporate assessment loss due to undeclared corporate assessments being classified according to the pupil population in the years 1980 to 1984, inclusive. Corporate assessment loss means a reduction in corporate assessment allocated to a district of a board under Section 64 of The School Act as a result of the coming into force of Section 10 of the School Amendment Act, 1979[1]. Specifically, Section 64 states that a separate school district is entitled to the same ratio of the total assessment of property within a municipality as their resident pupil count is to the total number of resident pupils residing in the school jurisdiction

The portion of the corporate assessment loss that will be compensated for by a grant in each of the eligible years is shown in Table 3.7.

TABLE 3.7

(continued)

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[1] Section 59 subsection 1(b) of the Grants Regulations under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order, 1980.

TABLE 3.6

SUPERINTENDENCY/SMALL SCHOOL JURISDICTION GRANT PER 1973 - 1980 REGULATIONS

Year	Conditions[1]	Applicable Formula
1973 - 74	$P \leq 600$ & $E \geq 900$	Lesser of -- sum of \$9 per pupil, or -- \$3600, or -- actual cost
1978	$P \leq 700$ & $E \geq 800$	Lesser of -- sum of \$13.50 per pupil, or -- \$5400, or -- actual cost
1979	$500 \leq N < 1500$ $N < 500$	\$27,750 - (\$18.50 x N) \$ 1,250 + (\$34.50 x N)
1980	$500 \leq N < 1500$ $N < 500$	\$30,375 - (\$20.25 x N) \$ 1,400 + (\$37.70 x N)

[1] P is the number of pupils enrolled in the schools of each board
E is the total combined enrolment of those boards who jointly employ a superintendent
N is the number of enrolled pupils

TABLE 3.7

ALLOCATION OF THE CORPORATE ASSESSMENT GRANT AS PER 1980 GRANTS REGULATIONS

Year	Percentage of Corporate Assessment Loss Reimbursed
1980	100%
1981	80%
1982	60%
1983	40%
1984	20%

Location Allowance Grant

The Location Allowance Grant was established during the last half of 1971 to aid boards with the additional costs incurred as a result of employing teachers in remote and isolated communities. In essence, the allotted grant money reflected an isolation bonus to the qualifying boards. Since 1978 a teacher housing component equivalent to forty percent of the Location Allowance Grant has also been part of the composition of the Location Allowance Grant.

Regulations. The regulations governing the allocation of the Location Allowance Grant underwent two major revisions since the enactment of the grant in 1971. The first occurred in 1976 at which time the public and separate school districts of Fort McMurray were specifically identified as school jurisdictions to be allocated a location allowance grant. At that time, the regulations read as follows: [1]

> 52 (1) A location alowance grant determined pursuant to subsection (2) may be paid for 1976 to the Board of Trustees of the Fort McMurray Public School District No. 2833 and the Board of Trustees of the Fort McMurray Roman Catholic Separate School District No. 32.

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[1] Regulations under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order, 1976.

> (2) The amount of grant payable to a board under this section shall be the sum obtained by multiplying $75 by the number of pupils enrolled in the schools of the board as of the last school day of September in 1976.

The second change in the regulations governing the allocation of the Location Allowance Grant followed and appeared to be the result of the Wahlstrom report[3], in which Wahlstrom recommended that for purposes of the grant the province be divided into ten areas and a point system be used as a means of assessing the degree of eligibility of each school jurisdiction. In 1977, such a point system was implemented but the province was divided into five areas rather than the recommended ten. This system of determining which school jurisdictions are eligible for a Location Allowance Grant and the amount to be allocated remains as the current practice (Table 3.8).

Private School Opening Grant

The Private School Opening Grant was provincially introduced in the last half of 1977 although the grant was not enacted until 1978. The grant is paid to a board to compensate for the loss of revenue which results when pupils resident within the board's jurisdiction attend an approved private school within the geographic boundaries of the board. The loss of revenue is compensated at a rate equal to one hundred percent of the School Foundation Program Fund entitlement for basic pupil instruction and pupil transportation in the first year and fifty percent of the entitlement for basic pupil instruction in the second year.

Incremental Grant

The Incremental Grant was mainly established to assist Northland School Division No. 61 and Fort Vermilion School Division No. 52 in meeting their costs of operation (Baron, 1981). Other jurisdictions may apply for an Incremental Grant if unable to continue operations with their present level of provincial grants and locally generated funds. Besides this situation, a jurisdiction may receive an Incremental Grant to cover the costs of a special program which the Minister of Education has stated will be fully funded by the government. Thus, by means of direct grants to school boards assistance

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[3] E. G. Whalstrom, A Study: Isolation Bonus and Teacher Housing. Project North, Findings and Recommendations. A report submitted to the Planning and Research Branch, Alberta Education, May 1976.

TABLE 3.8

LOCATION ALLOWANCE GRANT PER 1980 REGULATIONS

Area	Description	Applicable Grant Amount
1	That part of the Province of Alberta lying within the boundaries of the Fort McMurray School District No. 2833.	Lesser of -- sum of $36.10 per pupil, or -- actual cost
2	That part of the Province of Alberta (i)lying North of Township 76 (the 20th Base Line) and West of Range 16; West of the 5th Meridian, (ii)lying North of Township 76 (the 20th Base Line) and East of Range 14; West of the 5th Meridian, (iii)lying North of Township 80 (the 21st Base Line), West of Range 13 and East of Range 17; West of the 5th Meridian, (iv)within that part of Conklin School District No. 4835 lying in Township 76, lying North of Township 76 (the 20th Base Line) and East of the 5th Meridian excluding any part of Area 1.	Lesser of -- 107% of all location allowance grants paid or payable to the board, or -- actual cost
3	That part of the Province of Alberta lying South of Area 2 excluding any part of Area 4 or Area 5.	Lesser of -- 107% of all location allowance grants paid or payable to the board, or -- actual cost

TABLE 3.8 (continued)

Area	Description	Applicable Grant Amount
4	That part of the Province of Alberta lying (i)within a radius of 160 kilometres of the City of Edmonton, the City of Red Deer or the City of Calgary, excluding the Caslan School District No. 4780, (ii) South of Township 55 and West of the territory under subclause (i), (iii)South of a line drawn East and West through the centre of Township 20 (the North boundary of the Military Experimental Range).	Lesser of -- 107% of all location allowance grants paid or payable to the board, or -- actual cost
5	That part of the Province of Alberta lying within a radius of 40 kilometres of the City of Grande-Prairie	Lesser of -- 107% of all location allowance grants paid or payable to the board, or -- actual cost

is provided in respect of unique recognized problems of a jurisdiction or specially approved programs not provided for elsewhere under the grant structure.

A term commonly attached to the Incremental Grant is the "catch all" grant, suggesting costs not covered by other grants are provided for by an Incremental Grant.

Discussion

The above has presented a review of the rationale and the governing regulations of eight categorical grants, namely, the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, and the Incremental Grant. As evident from the above review, each of these grants have been enacted for the purpose of decreasing the fiscal disparity between local school jurisdictions as a result of circumstances beyond the control of the jurisdictions. The circumstances identified were wealth, loss of students because of declining enrolments, size, the ability of jurisdictions to adjust operating costs in light of lost revenue, isolation, and the loss of students due to the operation of private schools.

SCHOOL FOUNDATION PROGRAM FUND

The School Foundation Program Fund (S.F.P.F.) was established in 1961 by the provincial government for the purpose of providing local school jurisdictions under its authority with support for a basic or minimum level of educational services in elementary and secondary schools. The fund was and is composed of two parts: (1) that portion allocated from provincial general revenue and (2) the amount raised by a regulated tax rate on the assessed valuation of each municipality. After 1974, this regulated tax applied only to the commerical and industrial property of the municipalities, the tax rate dropping from 32 mills in 1961 to 21.5 mills in 1980.

Regulations. All local school jurisdictions are eligible for assistance under the S.F.P.F. regulations, assistance being provided in four areas: (1) instruction, (2) transportation, (3) administration, and (4) debt retirement and capital expenditure. A board's entitlement in each of these four areas for the calendar year 1980 is presented in Table 3.9.

SUMMARY

A brief survey of the literature which addressed state and provincial governments attempts to modify existing financial plans so as to achieve a greater degree of financial equalization among their school jurisdictions has been presented in this chapter. The results of these attempts indicated only marginal improvement over financial plans that were in place prior to the reform. Still, Canadian financial plans did appear to have a greater success rate with equalization reform efforts than did their American counterparts.

The attempt of the Province of Alberta in particular was investigated in some detail, with this financial plan providing the focus for the present study. The applicability of the eight provincial categorical grants to any given school jurisdiction has changed slightly since the inauguration of the grant regulations. The foundation fund, on the other hand, has changed considerably in appearance since its introduction in 1961, although its intent has remained intact.

TABLE 3.9

SCHOOL FOUNDATION PROGRAM FUND PER 1980 REGULATIONS

Grant Category	Applicable Amount
Instruction	-- $1242 per elementary pupil -- $1302 per junior high pupil -- $1491 per senior high pupil Where a school district has been established to educate the children of employees of the Government of Canada, the grants paid to a board equal 50% of the amounts listed above.
Transportation	
- Rural Areas	Basic grant of -- $33.00 to $49.00 per school day for each bus with a seating capacity of 12 or more, or -- $30.50 per day for each school day a bus (a)is unable to operate because of inclement weather, or (b)does not operate because the board has designated that day (up to a maximum of five in a school year) a teacher-convention day, an in-service day, or a parent-teacher interview day. Plus, -- $.37 per km per day for transporting students to and from school for distances travelled by all buses above the fleet average of 80 km per bus, and --$.37 for each km per pupils transported between schools for regular scheduled instruction during the school day. For use of special vehicles --$2.90 per day for each pupil transported from two or more families up to (a)$11.60 for cars (b)$20.30 for station wagons (c)$29.00 for vans (d)$35.00 for horse drawn vehicles

TABLE 3.9 (continued)

Grant Category	Applicable Amount
	with an additional $.28 per km for distances travelled by all motor vehicles owned, leased or under contract to a board over a fleet average of 50 km per vehicle.
- City School Districts	-- $121 per pupil per year for incurred transportation costs
- Special Support	
- conveyance of severly handicapped pupils	-- up to $5.25 per day
-conveyance of regular pupils by a parent to a school or bus route	-- $.28 per km for the eligible distance one way up to $4.30 per day
-boarding allowance	-- up to $6.00 per day
Administration	-- 3% of the total claim for basic per pupil grants for grades 1 through 12 and pupil transportation
Debt Retirement & Capital Expenditure	-- an amount equal to the expenditure of the board during the year for the retirement of debentures and short term capital loans, both principal and interest

Sources:

Regulations Under the School Act, School Foundation Program Fund Regulations, Government of Alberta, 1980; A. L. Jefferson, "How Basic Education Is Supported By the Government of Alberta," A document prepared for the Finance, Statistics and Legislation Branch, Alberta Education, 1980.

CHAPTER 4

DESIGN OF THE STUDY

This chapter describes the population of the study, the data sources, and the statistical procedures utilized in the study.

POPULATION

The population for the study consisted of all school divisions, counties, public and separate school districts (including rural, village, town, and city districts), consolidated school districts, protestant separate school districts, roman catholic public school districts, and regional school districts within the Province of Alberta. A listing of these school jurisdictions is provided in Appendix A.

The data were delimited to that information relevant to the jurisdictions' public and separate elementary and secondary school populations.

SOURCES OF DATA

The data utilized in the study were obtained from the Alberta Department of Education, Edmonton, Alberta, Canada. The chief source of information was the ledger accounts of the School Grants section of the Finance, Statistics and Legislation Branch, Alberta Education. From these accounts, the amount of grant monies allocated to the various school jurisdictions was ascertained. Grants identified for the purposes of this study were the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, the Incremental Grant and the School Foundation Program Fund. The reason for the selection of these nine grants was that taken together they appear to have been designed for the purpose of accounting for the fiscal ability of local school jurisdictions. Additional required information (such as eligible enrolment count and the equalized assessment of the local school jurisdictions) was obtained from other documents submitted regularly to Alberta Education by local school jurisdictions and from prepared reports of the different branches of Alberta Education (e.g., Field Services; Planning and Research).

METHODOLOGY

Problem 1

> *To what extent has the distribution of provincial funds among local school jurisdictions in Alberta achieved fiscal equalization?*

Sherman (1981:20) claimed that when analyzing fiscal equalization four major types of decisions need to be made, all of which are based on value judgments: (1) target group, (2) treatments, (3) criteria, and (4) specific measures.

In this analysis, the target group was the local school jurisdictions and the criterion was the extent to which fiscal neutrality had been achieved. The treatment and specific measures adopted are outlined below.

Sub-problem 1.1. The first question asked in the investigation of problem one was labelled sub-problem 1.1 and worded in the following manner:

> *What is the distributional pattern of provincial grants in terms of mills per school jurisdiction?*

Provincial grants for the purpose of this investigation were taken to be the sum of the eight categorical grants discussed earlier in Chapter 3, namely, the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, and the Incremental Grant.

To determine the allocation pattern of these grants, the aggregation of allotted funds, hereinafter referred to as provincial support, were first converted to mills for each jurisdiction. This conversion of dollars to mills was achieved by the formula:

$$ES_i = TG_i/D_i$$

where,

ES_i = the provincial support, in mills, received by jurisdiction i,

TG_i = the total amount of funding (aggregated categorical grants) received by jurisdiction i, and

D_i = the dollars per mill (equalized assessment divided by one-thousand) for jurisdiction i. Those jurisdictions for which equalized assessments were not available were categorized as "data missing" and ignored during the analysis.

Sub-problem 1.2. The second question asked in the investigation of problem one was labelled sub-problem 1.2 and worded in the following manner:

> *What is the distributional pattern of provincial allocations (exclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?*

As with sub-problem 1.1, provincial allocations were equated to the eight provincial categorical grants.

To examine the pattern of distribution for the combined categorical grants in relation to the equalized assessed valuation per pupil of local school jurisdictions, two analytical techniques were utilized. One technique adopted was the coefficient of variation (standard deviation divided by the mean) where a diminution in the coefficient from one year to the next indicates a movement away from equalization but towards equality. This statistical technique, according to Hickrod, Chaudhari and Lundeen (1980:181), "takes into consideration all of the variation in expenditures per pupil among districts including both the high and the low spending districts in the distribution." In this study, revenue rather than expenditure data were used. Revenue data as opposed to expenditure data was used since the allocation effect of grants received by local school jurisdictions was the point of investigation as opposed to how jurisdictions decided to spend such amounts.

The second technique employed was the Gini coefficient otherwise known as the coefficient of concentration. This coefficient, according to Hickrod, Yang, Hubbard, and Chaudhari (1975:14), "is based upon a bi-variate set of measurements rather than a univariate set of measurements. That is, both wealth and expenditures (or alternatively revenues) are used rather than expenditure alone." The Gini coefficient (G) as applied to provincial aid was interpreted in the following manner: "The higher the value of G . . . the better [the situation] is for poor districts and the higher is the equalization" (Hickrod, 1973:110).

In calculating the Gini coefficient, the following formula was used:

$$G = \sum_{i=2}^{N} (x_{i-1} y_i - x_i \, y_{i-1})$$

where,

x_i = the cumulative proportion of the eligible enrolment for the *i*th jurisdiction, and

y_i = the cumulative proportion of dollars for the *i*th jurisdiction.

The graphical representation of the coefficient is given by the Lorenz curve.

The Lorenz curve was developed by initially ranking, in ascending order, all jurisdictions by their equalized assessment per eligible pupil. Jurisdictions for which equalized assessment and/or eligible enrolment data were not available were ignored. Once the school jurisdictions were sorted, the cumulative proportions of eligible pupils and the cumulative proportions of grant appropriations were plotted on coordinate axes. The horizontal axis represented the cumulative proportions of eligible pupils and the vertical axis represented the cumulative proportions of grant appropriations. An illustration of a Lorenz curve with the coordinated axes labelled as described above is given in Figure 4.1.[1] Grant appropriations consisted of the eight provincial categorical grants.

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[1] The Lorenz curve which is plotted would be a straight line if the grant appropriations to school jurisdictions were not a function of jurisdictions' wealth. A curve above the diagonal line would indicate that poor jurisdictions were receiving more funds from the government than wealthy jurisdictions.

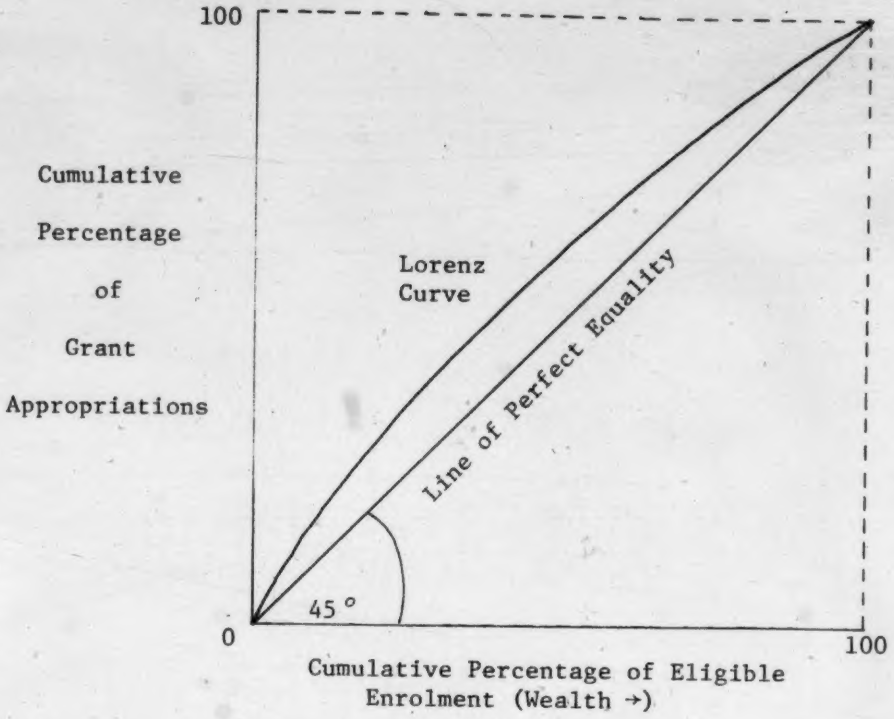
100
Cumulative
Percentage
of
Grant
Appropriations
Lorenz
Curve
Line of Perfect Equality
45 °
0
100
Cumulative Percentage of Eligible
Enrolment (Wealth →)

FIGURE 4.1

THE APPLIED LORENZ CURVE

A Lorenz curve above the diagonal would result in a negative Gini coefficient meaning that poor jurisdictions received more provincial aid than the wealthy jurisdictions. On the other hand, if the value of Gini coefficients were positive the curve would sag below the diagonal line indicating that wealthier jurisdictions received higher grant appropriations than poorer school jurisdictions. In cases where the Lorenz curve crosses the diagonal line the Gini coefficient is taken to be uninterpretable. The reason is that the Gini coefficient is representative of an area, with the area above the diagonal line negative in value and the area below the diagonal line positive in value. Therefore, should the Lorenz curve cross the diagonal line areas above the line would tend to cancel, in the mathematical sense, areas below the line. As a result, the Gini coefficient generated does not truly represent the distribution of funds on the bases of the jurisdictions' wealth.

Sub-problem 1.3. The third question asked in the investigation of problem one was labelled sub-problem 1.3 and worded in the following manner:

What is the distributional pattern of provincial allocations (inclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?

For the purpose of answering this question, the analytical techniques used were the coefficient of variation and the Gini coefficient as described under sub-problem 1.2 as well as the correlation coefficient. The total amount of funds available to given school jurisdictions consisted of not only the eight categorical grants used in the investigation of sub-problem 1.2, but also the foundation program fund allocation, and the local supplementary requisition. The inclusion of the School Foundation Program Fund (SFPF), however, created difficulties in the treatment of the mandatory foundation levy on all non-residential property. As stated by Hill and Paige (1981:123),

> School board revenue has two primary sources -- provincial grants and local taxation on property collected by municipalities to cover supplementary requisitions.
>
> Since the Government of Alberta levies a standard property tax on all non-residential property as a source of revenue for SFPF, "local contribution" can be defined to either include or exclude this amount.

For the purpose of this study, both alternative definitions of "local contribution" were incorporated.

The rationale for the inclusion of the foundation amount as part of the local contribution, as reasoned by Hill and Paige (1981:123), was that this portion of the SFPF flows from local taxpayers (in the sense of "local taxable assessment") and therefore would be most appropriately considered as part of the local financial support for local schooling services. On the other hand, the exclusion of the amount raised by the mandatory foundation levy from the financial support extended to education by the locality can be argued on the basis that in effect the municipalities are only acting as collecting authorities for the province. That is, the municipalities have no input into the rate that is to be levied and all must comply. The levy is therefore a provincial tax and not part of the local discretionary contribution to the financing of education.

The amount of this levy for each jurisdiction in the province unfortunately was not readily available. The reason for this situation was simply that municipalities not school jurisdictions are the collecting authorities and therefore the required information was available on a municipal basis only. The resulting problem for the present study was that in order to determine a dollar figure per school jurisdiction one needed to know what municipalities made up a given school jurisdiction plus what proportion of each municipality was within the boundaries of that jurisdiction. The latter was a more serious challenge since municipal boundaries are often not coterminus with the boundaries of school jurisdictions. Consequently, a system of approximation was used.

The Planning and Research Branch of Alberta Education indicated that estimations of the SFPF local levy had been calculated for the decade 1969 to 1979. The estimated local SFPF levies for the years 1975 to 1979 for 165 school jurisdictions were made available for use in the present study. A close examination of this data against figures in documents supplied by the Planning and Research Branch of the Government revealed errors in the calculation for approximately 25 percent of the jurisdictions. Because of this high rate of error in the data, source documents available at the Assessment Equalization Board and which had been used by the Planning and Research Branch in their original calculations were used to correct the data and also to make the necessary calculations for the year 1980.

The procedure adopted in determining the amount of the local SFPF levy for a particular school jurisdiction was to (1) identify the collecting authorities. and (2) pro rate the portion of the proceeds of each collecting authority from the SFPF levy. The local jurisdictional SFPF levy was then calculated as shown in Table 4.1.

In June 1977, the Provincial legislation established a new approach to assessing property values in Alberta resulting in some instances in a substantial increase in the local SFPF requisition. This new approach to computing assessments for educational purposes as described by Alberta Municipal Affairs (1977) is summarized in Table 4.2.

Analysis was on the basis of all local school jurisdictions as well as type of jurisdiction (divisions, counties, public school districts, and separate school districts). Though Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Separate School Districts were included when school jurisdictions were examined in the aggregate, no analyses by type were performed for these specific classifications of school jurisdictions. The reason for this decision was that each of these types of jurisdictions numbered fewer than ten and therefore the meaningfulness of any relationship identified would have been of little consequence.

TABLE 4.1

AN EXAMPLE OF THE SFPF REQUISITION CALCULATIONS FOR A SCHOOL AUTHORITY USING EQUALIZED ASSESSMENT FIGURES FOR ASSOCIATED MUNICIPALITIES

Collecting Authority (1)	Total Equalized Assessment of Collecting Authority (2)	Value of the Equalized Assessment Within the School Authority (3)	Total Equalized Assessment Proportion (4)=(3)/(2)	Requisition of Collecting Authority (5)	School Authority Share of Requisition (6)=(4)x(5)
County A	$26,987,220	$22,513,700	.834	$322,605	$269,053
Town A	10,699,910	9,102,800	.851	63,474	54,016
Town B	3,083,020	1,868,520	.606	25,318	15,343
Village A	912,400	912,400	1.000	4,092	4,092
Village B	1,355,860	1,355,860	1.000	14,190	14,190
		SFPF Requisition for School Authority			$356,694

TABLE 4.2

ASSESSMENT REGULATION CHANGES

Type of Property	Prior to 1977	1977
Commercial Non-Farm Residences and Industrial Buildings	45% of 1963 Depreciated Replacement Cost	65% of Current Depreciated Replacement Cost
Industrial Machinery and Equipment	22 1/2% of 1963 Depreciated Replacement Cost	65% of Current Depreciated Replacemnt Cost

Sub-problem 1.4. The fourth and final question asked in the investigation of problem one was labelled sub-problem 1.4 and worded as follows:

> *What are the characteristics in terms of ability-to-pay, tax effort, and educational need of school jurisdictions receiving differing levels of provincial support?*

To explore the independence of the level of support realized by each local school jurisdiction in the province from other possible influencing variables, a multiple regression procedure was employed. One advantage of this technique, as highlighted by Deiseach (1974:40), is that it enables "one to specify the probability level for the addition or deletion of incoming variables to the regression." The acceptance-rejection level was set at $\underline{p}$ = .05.

The proportion of variance in the level of fiscal support accounted for by the ability of a jurisdiction to support education, as measured by its equalized assessment, the educational need of a jurisdiction, defined by its eligible enrolment, and the tax effort exerted by the school jurisdiction by way of the local supplementary requisition were examined.

The existence of an extremely high collinearity ($\underline{r}$'s = .99) between each of these three identified independent or predictor variables was representative of a situation commonly referred to as multicollinearity. Multicollinearity, in the words of Johnston (1972:201),

> . . . is the name given to the general problem which arises when some or all of the explanatory variables in a relation are so highly correlated one with another that it becomes very difficult, if not impossible, to disentangle their separate influences and obtain a reasonably precise estimate of their relative effects.

In addition, Nie et al. (1975:341) claimed that "when extreme multicollinearity exists there is no acceptable way to perform regression analysis using the given set of independent variables."

To reduce the existence of multicollinearity, the dependent variable, categorical grants, and the independent variables, equalized assessment and local supplementary requisition, were divided by the eligible enrolment count for each jurisdiction. The expected reduction, however, occurred to only a limited degree. That is, there continued to exist high intercorrelations between the variables equalized assessment per eligible pupil and local supplementary requisition per eligible pupil. The continued presence of a high collinearity ($\underline{r}$ = .73 to $\underline{r}$ = .91) again left the multiple regression procedure as a questionable analytic tool. To retain this procedure as a useful analytic tool, a decision was made to omit the independent variable local supplementary requisition per eligible pupil. This was done rather than dropping the independent variable equalized assessment per eligible pupil because the latter is also a variable used in other sub-problems of this study.

Thus, in utilizing the multiple regression procedure, categorical grants taken together were treated as the dependent or criterion variable and the independent or predictor variables were equalized assessment per eligible pupil and eligible enrolment.

Problem 2

> *Would the implementation of a different grant funding mechanism achieve significantly improved results over the present provincial allocation plan?*

The same total provincial allocations to local school jurisdictions used in the first part of the study was also used in testing the equalizing effect of alternative finance plans. As before, the coefficient of variation and the Gini coefficient were the adopted measures of equalization.

The alternative plans choosen to replace the present provincial allocation plan were power equalization and percentage equalization. A third approach taken was the introduction of a price index prior to the distribution of funds. The procedure followed in each approach is outlined below.

Sub-problem 2.1. The first question asked in the investigation of problem two was labelled sub-problem 2.1 and worded as follows:

> *What is the degree of fiscal equalization obtained under a power equalizing plan?*

The first step in operationalizing a power equalizing financial plan was to determine what a local effort of one mill raised regardless of the wealth of a school jurisdiction, as measured by equalized assessment per pupil. This figure was determined as follows:

$$\frac{L_t + P_t}{EAP_{aver}} \times 1000 = \$/mill$$

where,

L_t = the total local contribution for all jurisdictions,

P_t = the total provincial contribution for all jurisdictions, and

EAP_{aver} = the provincial average equalized assessment per eligible pupil.

Using this derived figure as a base, two methods were employed for redistributing funds under a power equalizing plan. The first method required (1) the total local contribution to all school jurisdictions combined, (2) the total provincial contribution to all school jurisdictions combined, and (3) the amount of revenue (provincial plus local) each jurisdiction had per pupil to remain the same as was the case under the existing provincial finance plan.

The second method incorporated only the first two conditions (total local and provincial funds remain unchanged) of the first method plus the requirement that the locally levied mill rate of each jurisdiction under the existing plan remain unchanged.

Sub-problem 2.2. The second question asked in the investigation of problem two was labelled sub-problem 2.2 and worded as follows:

What is the degree of fiscal equalization obtained under a percentage equalizing plan?

The formula applied in the investigation was as follows:

$$PA_i = [1 - k(EA_i/EA_p)]c$$

where,

PA_i = provincial aid for jurisdiction i,

k = a predetermined constant,

EA_i = the equalized value of property per pupil in jurisdiction i,

EA_p = the provincial average equalized value of property per pupil, and

c = the total educational revenue per pupil.

Sub-problem 2.3. The third question asked in the investigation of problem two was labelled sub-problem 2.3 and worded as follows:

> *What is the degree of fiscal equalization obtained when the amount of the grant is adjusted by a price index under*
>
> *a) the existing allocation plan?*
>
> *b) a power equalizing plan?*
>
> *c) a percentage equalizing plan?*

According to Peat, Marwick and Partners (1981b:148), "the three major types of aggregate index numbers used to illustrate price changes are the Laspeyres index, Paasche index, and Fisher ideal index." A description of each index, as set forth by Peat, Marwick and Partners (1981b:148), is given below.

> Laspeyres index. The Laspeyres index is most effective in tracking price and/or quantity changes over time, since it is base-weighted to the initial or reference year of the series. Its applicability to changes over time makes it the most widely used index .... The Laspeyres index can track changes both backward and forward in time.
>
> Paasche index. The Paasche index can be described as current-weighted in the sense that the weight comes from the current year not the base year. For this reason, Paasche series is not strictly comparable over time and therefore has a restricted use, especially in the social sciences.
>
> Fisher ideal index. The Fisher ideal index, a cross between the Laspeyres and the Paasche indices, is used when a single answer is required to describe the

> alternative splits of value changes into price and quantity changes. The same results can be obtained by combining the results from the Laspeyres and Paasche numbers.

Based on the Peat, Marwick and Partners' report (1981b) and a study conducted by Atherton (1968), a base-weighted Laspeyres index was chosen as the adjustment procedure for capturing price changes over time for local school jurisdictions in Alberta. In the construction of the index two assumptions were made. The first was that any changes in operating expenditures among local school jurisdictions were consistent throughout the province. The second assumption was that changes in jurisdictional operating expenditures were consistent within types of school jurisdictions.

Under both assumptions, price indexes for the years 1975 to 1980 were constructed using the method of weighted price relative. Atherton (1968:17-18) explained the operation of this method in the following manner:

> In this method [weighted price relative] weights reflect the importance of each major group of inputs in the total expenditure pattern. A price relative is an expression of the percentage increase in price level for an input using the base year price level as 100.

Price indices for the four operating expenditure categories -- Instruction, Administration, Operation and Maintenance, and Transportation -- were thus determined according to the following formulas:

(PR) Price Relative = Current Year Expenditure / Base Year Expenditure

Weighted Price Relative = (PR) x Weight for Base Year

Finally, the adjusted grant allotment was determined by applying the formula:

Adjusted Grant = Grant / (Price Relative / 100)

With the focus of the study on equalization rather than shifts in expenditure patterns of jurisdictions, the four operating expenditure categories (Instruction, Operation and Maintenance, Administration, and Transportation) were not broken down into sub-categories or components. A summary of what components are included in each of the four operating expenditure categories, nevertheless, is given in Table 4.3.

TABLE 4.3

SUMMARY OF THE CONTENT OF FOUR OPERATING EXPENDITURE CATEGORIES

Components	Instruct[1]	Admin[2]	Oper&Main[3]	Trans[4]
Salaries				
Certificated Regular	x	x		
Certificated Temporary	x	x		
Uncertificated Regular	x	x	x	x
Uncertificated Temporary	x	x	x	x
Employee Benefits and Allowances				
Subsidized Housing & Board	x	x	x	x
Advanced Study & Bursaries	x			
In-Service Training	x	x	x	x
Other	x	x	x	x
Services Purchased and Contracted				
Professional/Technical Services	x	x	x	x
Postage/Communications	x	x		
Public Utility Service		x	x	x
Travel & Subsistence	x	x	x	x
Transportation of Pupils				x
Boarding Allowance				x
Allowance in Lieu of Conveyance				x
Maintenance and Repair Service		x	x	x
Rentals	x	x	x	x
Taxes		x	x	
Tuition	x			
Dues and Fees	x	x		
Printing and Binding	x	x		
Insurance/Board Premiums			x	x
Advertising		x		

TABLE 4.3 (continued)

Components	Instruct[1]	Admin[2]	Oper&Main[3]	Trans[4]
Supplies and Materials				
Supplies	x	x	x	x
Textbooks	x			
Media Materials	x	x		
Warehouse Inventory Adjustment	x	x	x	x
Transfers				
Interfund	x	x	x	x
School Jurisdiction	x	x		x
Other Gov't Authorities	x	x		x
Organizations/Individuals	x	x		x

[1] Instruction = Elementary + Junior High + Senior High
[2] Admin = Administration
[3] Oper&Main = Operation and Maintenance
[4] Trans = Transportation

SUMMARY

In this chapter the population, sources of data and the methodology of the study has been outlined. The process by which the first major problem of the study was analyzed involved the examination of three kinds of information. These were: (1) provincial allocated support to local school jurisdictions in mills, (2) provincial allocated support to local school jurisdictions in dollars, and (3) the equalized assessed valuation of real property for each local school jurisdiction. Analytical techniques employed were the correlation coefficient, coefficient of variation, Gini coefficient, and a multiple regression procedure. The second and final major problem of the study, that is, the fiscal equalizing effect of alternative finance plans, utilized two of the three kinds of information used in answering problem one. These were: (1) provincial allocated support to local school jurisdictions in dollars and (2) the equalized assessed valuation of real property for each local school jurisdiction. The analyses for this part of the study made use of two statistical techniques, namely, the coefficient of variation and the Gini coefficient.

CHAPTER 5

FISCAL EQUALIZATION EFFECTS OF THE EXISTING ALBERTA EDUCATION FINANCE PLAN

This chapter presents the findings of the data analysis associated with the fiscal equalizing effects of the existing educational finance plan in Alberta. The general problem (Problem 1) investigated read:

> *To what extent has the distribution of provincial funds among local school jurisdictions in Alberta achieved fiscal equalization?*

Provincial funds were taken to consist of the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, the Incremental Grant, and the School Foundation Program Fund.

The investigation of the above problem was divided into three stages, each stage addressed in this chapter. The first stage involved a description of the level of support, in terms of mills, that each local school jurisdictions received from the provincial government. During this stage of the analysis no attempt is made to relate the level of support to the wealth of the school jurisdictions. The second stage of the investigation examined the pattern in which provincial funds were allocated to local school jurisdictions in relation to the wealth of the jurisdictions. Wealth was defined as equalized assessment per eligible pupil. The third and final stage of the investigation repeated the analyses of stage two with the foundation fund allocations added to the provincial appropriations.

PROVINCIAL SUPPORT PATTERNS IN TERMS OF MILLS

What is the distributional pattern of provincial grants in terms of mills per school jurisdiction?

This section presents a description of the provincial level of support to local school jurisdictions regardless of the jurisdictions' fiscal ability. The pattern in which the provincial grants were allocated from 1975 to 1980 are reported below. Recall that for the purpose of this stage of the analysis funds received by the school systems from the foundation program were ignored.

1975

In the year 1975, 140 school jurisdictions received support from the provincial government while 18 jurisdictions (8 public school districts, 9 separate school districts, and 1 protestant separate school district) received no support (Tables 5.1). Of the 140 school jurisdictions, approximately half (51.9 percent) were allocated no more than 15 mills in assistance.

The jurisdictions benefiting to the greatest extent in terms of mills of tax relief, as indicated by Table 5.1, were the separate school systems. Twenty-three separate school systems (39.7 percent) received in excess of 20 mills in tax relief whereas only four school divisions (13.3 percent), one county (3.3 percent), and three public school districts (9.1 percent) received an equivalent level of support.

The jurisdictions that tended to benefit least in terms of mills of tax relief were school divisions, counties, and public school districts. For example, 14 divisions (46.7 percent), 12 counties (40.0 percent), and 14 public school districts (42.4 percent) received no more than five mills of tax relief whereas four separate school districts (6.9 percent) received at most five mills.

1976

As was the circumstance in 1975, approximately 88 percent of the school jurisdictions in 1976 qualified for provincial support (Table 5.2). Specifically, 139 school jurisdictions received assistance while 20 jurisdictions (1 county, 9 public school districts, 9 separate school districts, and 1 protestant separate school district) received

TABLE 5.1

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURISDICTION FOR 1975

	Types of Jurisdictions						
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total	
zero	0	0	8	9	1	18	(11.4%)
.01 - 5.00	14	12	14	4	0	44	(11.4%)
5.01 - 10.00	7	13	4	8	3	35	(27.8%)
10.01 - 15.00	4	2	4	8	2	20	(12.7%)
15.01 - 20.00	1	2	0	6	1	10	(6.3%)
20.01 - 25.00	1	1	1	4	0	7	(4.4%)
25.01 - 30.00	0	0	0	8	0	8	(5.1%)
30.01 - 35.00	0	0	0	3	0	3	(1.9%)
35.01 - 40.00	0	0	0	1	0	1	(0.6%)
40.01 or more	3	0	2	7	0	12	(7.6%)
Total (%)	30 (19.0%)	30 (19.0%)	33 (20.9%)	58 (36.7%)	7 (4.4%)	158	

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[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 5.2

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURISDICTION FOR 1976

	Types of Jurisdictions						
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total	
zero	0	1	9	9	1	20	(12.6%)
.01 - 5.00	16	16	11	5	1	49	(30.8%)
5.01 - 10.00	5	10	7	3	1	26	(16.4%)
10.01 - 15.00	4	2	3	11	4	24	(15.1%)
15.01 - 20.00	1	1	1	9	0	12	(7.5%)
20.01 - 25.00	1	0	0	4	0	5	(3.1%)
25.01 - 30.00	0	0	0	4	0	4	(2.5%)
30.01 - 35.00	0	0	0	3	0	3	(1.9%)
35.01 - 40.00	0	0	1	3	0	4	(2.5%)
40.01 or more	3	0	1	8	0	12	(7.5%)
Total (%)	30 (18.9%)	30 (18.9%)	33 (20.8%)	59 (37.1%)	7 (4.4%)	159	

[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

no support.

Sixty-two percent of the qualifying jurisdictions received at most 15 mills in tax relief. This is a slight change from the previous year where 52 percent of the qualifying school systems received at most 15 mills. School divisions (83.3 percent), counties (93.3 percent), and public school districts (63.6 percent) were represented to the greatest extent within this range of .01 to 15.00 mills in tax relief. In contrast, 32.2 percent of the separate school systems received no more than 15 mills in tax relief.

1977

The jurisdictional support pattern for the year 1977 was very similar to the pattern established the prior two years. During 1977, 141 jurisdictions qualified for provincial assistance whereas nine public school districts, eight separate school districts, and one protestant separate school district were ineligible for assistance (Tables 5.3). This latter finding is very much in line with earlier years where an equivalent number and types of jurisdictions were ineligible for support (see Tables 5.1 and 5.2).

The jurisdictions benefiting to the greatest extent were, as before, the separate school systems. Twenty-seven separate school systems (45.8 percent) received in excess of 20 mills in tax relief. In contrast, the jurisdictions that received little, if any, equalized support were concentrated once again in school divisions, counties, and public school districts. For example, 13 school divisions (43.3 percent), 15 counties (50.0 percent), and 13 public school districts (38.2 percent) were aided in amounts of no more than five mills.

1978

In 1978, 91 percent of the school jurisdictions, in comparison to 88 percent in the previous three years, received financial assistance from the provincial government. Specifically, 145 jurisdictions received assistance while 15 jurisdictions (6 public school districts, 8 separate school districts, and 1 protestant separate school district) received no assistance (Tables 5.4).

As in previous years, the separate school districts were the recipients of the higher levels of support. For example, 29 separate school districts (48.3 percent)

TABLE 5.3

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURISDICTION FOR 1977

	Types of Jurisdictions						
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total	
zero	0	0	9	8	1	18	(11.3%)
.01 – 5.00	13	15	13	4	0	45	(28.3%)
5.01 – 10.00	7	9	7	5	2	30	(18.9%)
10.01 – 15.00	5	4	1	7	3	20	(12.6%)
15.01 – 20.00	1	1	2	8	0	12	(7.5%)
20.01 – 25.00	1	1	0	7	0	9	(5.7%)
25.01 – 30.00	0	0	0	1	0	1	(0.6%)
30.01 – 35.00	0	0	0	8	0	8	(5.0%)
35.01 – 40.00	0	0	0	2	0	2	(1.3%)
40.01 or more	3	0	2	9	0	14	(8.8%)
Total (%)	30 (18.9%)	30 (18.9%)	34 (21.4%)	59 (37.1%)	6 (3.8%)	159	

---

[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 5.4

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURSDICTION FOR 1978

	Types of Jurisdictions						
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total	
zero	0	0	6	8	1	15	(9.4%)
.01 - 5.00	10	8	15	5	0	38	(23.8%)
5.01 - 10.00	8	13	6	3	3	33	(20.6%)
10.01 - 15.00	5	6	2	6	1	20	(12.5%)
15.01 - 20.00	2	1	0	9	0	12	(7.5%)
20.01 - 25.00	2	0	1	4	0	7	(4.4%)
25.01 - 30.00	0	1	1	4	1	7	(4.4%)
30.01 - 35.00	0	0	0	6	0	6	(3.8%)
35.01 - 40.00	0	0	0	3	0	3	(1.9%)
40.01 or more	3	1	2	12	1	19	(11.9%)
Total (%)	30 (18.8%)	30 (18.8%)	33 (20.6%)	60 (37.5%)	7 (4.4%)	160	

[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

received in excess of 20 mills whereas only 6.7 percent to 28.6 percent of the other school systems received tax relief in excess of 20 mills. At the same time, 33.3 percent of the school divisions, 26.7 percent of the counties, and 45.5 percent of the public school districts tended to be the recipients of zero to five mills. In contrast, 8.3 percent of the separate school systems received at most five mills in provincial support.

1979

The year 1979 tended to follow the pattern set in earlier years. Approximately 90 percent of the school systems qualified for provincial assistance. The school systems that did not qualify for provincial aid consisted of six public school districts, ten separate school districts, and one protestant separate school district (Table 5.5).

Once again, separate school systems received the greatest amount of tax relief from the province (56.5 percent received in excess of 20 mills in tax relief). Public school systems, on the other hand, received the least amount of support from the province. For example, 61.8 percent of the public school systems received at most five mills in provincial support whereas 30.0 percent of the school divisions and counties and 25.8 percent of the separate school districts received the same level of provincial support.

1980

During the year 1980, 152 school jurisdictions received financial assistance from the provincial government. At the same time, 19 school jurisdictions (6 public school districts and 13 separate school districts) were ineligible for financial assistance from the government (Table 5.6).

As observed in the previous five years, separate school systems received the greatest amount of provincial assistance in terms of tax relief. Twenty-seven separate school systems (38.6 percent) received in excess of 20 mills. In contrast, most school divisions (43.3 percent), counties (43.3 percent), and public school districts (47.1 percent) were assisted to the extent of five mills or less.

TABLE 5.5

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURISDICTION FOR 1979

	Types of Jurisdictions					
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total
zero	0	0	6	10	1	17 (10.4%)
.01 - 5.00	9	8	15	6	0	38 (23.3%)
5.01 - 10.00	9	12	7	4	4	36 (22.1%)
10.01 - 15.00	4	7	3	4	0	18 (11.0%)
15.01 - 20.00	3	2	0	3	1	9 (5.5%)
20.01 - 25.00	2	0	1	6	1	10 (6.1%)
25.01 - 30.00	0	1	0	7	0	8 (4.9%)
30.01 - 35.00	0	0	1	4	0	5 (3.1%)
35.01 - 40.00	0	0	0	2	0	2 (1.2%)
40.01 or more	3	0	1	16	0	20 (12.3%)
Total (%)	30 (18.4%)	30 (18.4%)	34 (20.9%)	62 (38.0%)	7 (4.3%)	163

[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 5.6

ALLOCATED PROVINCIAL SUPPORT BY TYPE OF JURISDICTION FOR 1980

	Types of Jurisdictions					
Provincial Support (Mills)	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[1]	Total
zero	0	0	6	13	0	19 (11.1%)
.01 - 5.00	13	13	16	13	0	55 (32.2%)
5.01 - 10.00	6	12	7	4	5	34 (19.9%)
10.01 - 15.00	6	4	2	7	1	20 (11.7%)
15.01 - 20.00	2	0	1	6	1	10 (5.8%)
20.01 - 25.00	0	1	0	5	0	6 (3.5%)
25.01 - 30.00	0	0	1	0	0	1 (0.6%)
30.01 - 35.00	0	0	0	7	0	7 (4.1%)
35.01 - 40.00	1	0	0	1	0	2 (1.2%)
40.01 or more	2	0	1	14	0	17 (9.9%)
Total (%)	30 (17.5%)	30 (17.5%)	34 (19.9%)	70 (40.9%)	7 (4.1%)	171

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[1] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

Discussion

As is evident from the above analyses, the number of school jurisdictions receiving support from the provincial government by way of categorical grants remained relatively stable for the years 1975 to 1980. During this time period, 88 to 91 percent of all local school jurisdictions qualified for provincial aid.

The support received by the various types of school jurisdictions, however, was not evenly distributed. This is to say, the allocation of funds did not ensure that the same percentage of school jurisdictions within each type (i.e., school divisions, counties, public and separate school districts) were represented within a given range of tax relief. For example, in 1980 63.3 percent of the school divisions, 83.3 percent of the counties, 67.6 percent of the public school districts, 24.3 percent of the separate school districts, and 71.4 percent of the remaining school jurisdictions received from .01 to 10.00 mills of tax relief. Thus, as revealed by the percentage figures provided, separate school districts were the recipients of the greater amount of tax relief in terms of mills. A detailed breakdown of the level of provincial support, in terms of mills, allocated to local school jurisdictions within the Province of Alberta is given in Appendix B.

PROVINCIAL SUPPORT PATTERNS IN TERMS OF EQUALIZED ASSESSMENT PER PUPIL

The above discussion on the general distribution pattern of provincial funds revealed that such funds were not evenly distributed among all local school jurisdictions. With no other variable introduced into the analysis, whether this distribution pattern compensated sufficiently for existing differences in local fiscal ability at the jurisdiction level remained unanswered. For this reason, this section of the analysis presents the findings resulting from the investigation of the relationship between the aforementioned allocated provincial grants and the fiscal ability of the local school jurisdictions, defined as equalized assessment per eligible pupil. The investigation was broken down into two parts. The first part equated allocated provincial grants to the sum of the earlier identified categorical grants; namely, the Supplementary Requisition Equalization Grant, the Declining

Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, and the Incremental Grant. The second part added the foundation fund to the allocated provincial funds. Within this second part of the analysis, the extent to which equalization was obtained among local school jurisdictions was determined by utilizing three different revenue bases -- total appropriations (i.e., the sum of provincial and local appropriations), provincial appropriations, and local appropriations.

Aggregated Categorical Grants

> *What is the distributional pattern of provincial allocations (exclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?*

The relationship between the combined eight categorical grants and the wealth or equalized assessment per pupil of local school jurisdictions was examined by way of two equalization measures, namely, the coefficient of variation and the Gini coefficient. By the use of these measures, the extent to which the provincial scheme of allocation compensated for varying local fiscal ability was illustrated.

Coefficient of variation. Coefficients of variation in categorical grants (aggregated) per eligible pupil for the years 1975 to 1980 are given in Table 5.7. With respect to the distribution of grant monies for all local school jurisdictions combined, there was a general decrease in the value of the coefficient (exception occurred in 1976 where the coefficient increased from 1.46 to 1.65, a rise of .18). This decrease in the level of variation was also evident within school divisions. In other words, from 1975 to 1980 school divisions were also becoming less distinguishable in terms of the level of provincial support received. In contrast, public and separate school districts deviated from the mean at a continual rate until at least 1979 at which time the level of variation for public school districts dropped from 1.31 to .97, still 15 percent higher than the variability level in 1975. In 1980, this level of variation (.97) dropped another two percent to a level of .95. Separate school districts reached their peak in terms of deviation from the mean in 1979. At that time, the coefficient of variation had increased from .51 in 1975 to .68. By 1980 the value of the coefficient had dropped to .62. In view of these changes in the degree to which provincial appropriations to school divisions and public

TABLE 5.7

COEFFICIENT OF VARIATION FOR THE AGGREGATED CATEGORICAL GRANTS PER ELIGIBLE PUPIL BY TYPE OF JURISDICTION

	Coefficient of Variation[1]					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	1.47	1.65	1.12	1.02	.96	.82
Divisions	2.11	2.35	1.63	1.38	1.32	1.05
Counties	.58	.66	.56	.77	.52	.58
Public School Districts	.82	.81	1.26	1.31	.97	.95
R.C.S.S.D.	.51	.59	.58	.63	.68	.62

[1] Standard Deviation Divided By the Mean

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

and separate school districts deviated from the mean, the level of variation for counties in 1975 was the same in 1980, specifically .58. Even so, there was some fluctation in the value of the coefficient in the interim years.

Gini coefficient. The Gini coefficients for the extent to which fiscal equalization was achieved within the Province of Alberta between 1975 and 1980 are given in Table 5.8. Negative values for the coefficients were recorded for each of the six years thus indicating that the poorer jurisdictions received more assistance from the province than the wealthy school jurisdictions. Recall that the meaning of the negative sign is that the Lorenz curve lies above the diagonal as opposed to the mathematical interpretation of the sign. To avoid confusion, the sign of the Gini coefficient is reversed and the absolute value of the coefficient is referred to in the subsequent analysis. This situation improved for the poorer school systems within counties and separate school districts from 1975 to 1980 whereas the opposite was found to be true within school divisions and public school districts. For example, the Gini coefficient in 1975 was .51 for school divisions whereupon it increased to .59 in 1976 followed by a drop of .29 to a value of .30 in 1980. This decrease in the value of the Gini coefficient from 1975 to 1980 indicated that school systems within the school divisions category were receiving provincial aid less in accordance to their fiscal ability. The opposite was evident among separate school districts where the Gini coefficient increased from .31 in 1975 to .43 in 1980. Thus, by 1980 there was a greater tendency for provincial allocations to be directed to the poorer separate school systems.

Discussion. The coefficient of variation and the Gini coefficient were used in the above analyses to illustrate the pattern in which categorical grants were distributed to school jurisdictions in terms of the jurisdictions' equalized assessment per eligible pupil.

A decrease in the value of the coefficient of variation from one year to the next was taken to indicate that the variability in the allocation of aggregated categorical grants to local school jurisdictions was shrinking. The coefficient of variation increased in value from 1975 to 1976 for all jurisdictions taken together at which point the value decreased steadily to its lowest level of .82 in 1980. In general, the level of variation decreased from 1975 to 1980 indicating that allocated provincial categorical grants were discriminating less on the basis of the fiscal ability of school jurisdictions.

TABLE 5.8

EQUALIZATION IMPACT OF THE AGGREGATED CATEGORICAL GRANTS AS GIVEN BY THE GINI COEFFICIENT

	Gini Coefficient[1]					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	-.50	-.61[3]	-.49	-.52	-.53	-.43
Divisions	-.51	-.59	-.17[3]	-.26	-.27	-.30
Counties	-.15	-.29	-.23	-.31	-.34	-.33
Public School Districts	-.45	-.81	-.77	-.43	-.41[3]	-.15[3]
R.C.S.S.D.	-.31	-.28	-.30	-.37	-.35[3]	-.43

[1] The Higher the Value of the Gini Coefficient the Greater the Degree of Equalization

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

[3] Lorenz curve crosses the diagonal line.

Alternating patterns in grant apportionments were observed when the jurisdictions were isolated by type (i.e., school divisions, counties, public school districts, and separate school districts).

Using both grant apportionments and equalized assessment per eligible pupil as variables in the determination of the extent to which fiscal equalization was achieved, poorer school jurisdictions tended to receive greater grant apportionments than the more wealthy school jurisdictions. The value of the Gini coefficients when all local school jurisdictions were combined indicated that the degree of equalization obtained was lowest in 1980 and highest in 1976.

Considered together, the results of the aforementioned analytical techniques seemed to indicate that as a reduction occurs in the variability of grants appropriations per eligible pupil a corresponding increase in the extent to which fiscal equalization is achieved among the school jurisdictions is also evident. Hence, the fiscal ability of school jurisdictions (as reflected by their equalized assessment per pupil) would appear to be a determining factor or variable in how the province decides to allocate funds to its local school jurisdictions.

Total Fiscal Appropriations

> *What is the distributional pattern of provincial allocations (inclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?*

Comparisons between allocated provincial funds to local school jurisdictions and jurisdiction wealth are given in Table 5.9. As indicated by this table, there is a great discrepancy in the wealth of school jurisdictions, as measured by equalized assessment per eligible pupil, and this discrepancy has tended to increase over time. This increasing disparity in wealth, however, appears not to be associated with the amount of provincial funds allocated. That is to say, there appears to be little discrimination in the level of financial support extended to the poorest jurisdiction as compared to the financial support extended to the most affluent jurisdiction. For example, in 1980 the most affluent jurisdiction had an equalized assessed valuation per pupil 46 times as great as the least affluent jurisdiction; yet, this jurisdiction received 2.5 times more funds from the province than the poorest jurisdiction.

TABLE 5.9

RATIOS OF TOTAL FISCAL APPROPRIATIONS[1] IN RELATION TO JURISDICTIONAL WEALTH

Year	Equalized Assessment Per Pupil (L:H)[2]	Fiscal Appropriations Per Equalized Assessment Per Pupil (L:H)	Fiscal Appropriations (L:H)
1975	1:29.7	1:0.8	1:3.1
1976	1:48.1	1:1.6	1:2.9
1977	1:36.0	1:1.4	1:2.6
1978	1:35.6	1:2.6	1:2.7
1979	1:45.7	1:2.2	1:3.0
1980	1:46.2	1:1.1	1:2.5

[1] Total Fiscal Appropriations = Supplementary Requisition + Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Inclusive of the Mandatory Levy)

[2] Least Affluent Jurisdiction In Comparison to the Most Affluent Jurisdiction

The equalizing or disequalizing tendencies of such a funding pattern is discussed below in further detail by way of three equalization measures -- the correlation coefficient, the coefficient of variation, and the Gini coefficient.

Wealth correlations. Coefficients of correlation between jurisdiction wealth and the total amount of fiscal funds at the disposal of local school jurisdictions for the years 1975 to 1980 are given in Table 5.10. Prior to 1978, the correlation coefficients for all jurisdictions combined tended to become stronger with a value of .75 established in 1977. From 1978 to 1980, the value of the coefficient decreased reaching a low of .54 in 1980.

The value of the correlation coefficients for the different types of jurisdictions ranged from a low of .27 (counties) to a high of .80 (school divisions). Counties and public school districts showed evidence of a weakening relationship between their wealth and allocated provincial plus local funds from 1975 to 1980. The unanticipated low value of .44 in 1977 for public school districts requires further examination before an adequate explanation is given. In comparison, this relationship between wealth and allocated funds was stronger in 1980 than in 1975 for school divisions and separate school districts.

Coefficient of variation. Coefficients of variation in provincial plus local appropriations per eligible pupil are given in Table 5.11 for the years 1975 to 1980. As indicated by this table, the level of variation has remained relatively stable within the various types of school jurisdictions as well as with all jurisdictions combined. The greatest degree of change in the level of variation was within public school districts where the value of the coefficient dropped from .23 in 1975 to .12 in 1976 and returned to slightly above its initial value of .23 in 1978. School divisions were the most stable of all jurisdictions with no more than a one point increase or decrease at any given time and counties retained the lowest level of variation (.08) for the considered period of time.

Gini coefficient. The Gini coefficients for the extent to which fiscal equalization was achieved among local school jurisdictions on the basis of local and provincial appropriations combined are given in Table 5.12. Generally, positive values were recorded for the Gini coefficients indicating that the wealthy jurisdictions had more

TABLE 5.10

CORRELATION COEFFICIENTS OF THE RELATIONSHIP BETWEEN JURISDICTIONAL WEALTH AND TOTAL FISCAL APPROPRIATIONS[1]

	Correlation Coefficient					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2] (N = 128 to 136)	.660***	.724***	.748***	.593***	.590***	.538***
Divisions (N = 29 to 30)	.579***	.620***	.787***	.763***	.739***	.795***
Counties (N = 30)	.594***	.658***	.776***	.400**	.368***	.273
Public School Districts (N = 21 to 27)	.720***	.710***	.444*	.750***	.814***	.617***
R.C.S.S.D. (N = 41 to 43)	.571***	.695***	.748***	.638***	.503***	.696***

[1] Total Fiscal Appropriations = Supplementary Requisition + Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Inclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

*$p \leq .05$

**$p \leq .01$

***$p \leq .001$

TABLE 5.11

COEFFICIENT OF VARIATION FOR FISCAL APPROPRIATIONS[1] PER ELIGIBLE PUPIL BY YEAR

Types of Jurisdictions	Coefficient of Variation 1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	.21	.20	.19	.21	.20	.20
Divisions	.24	.25	.24	.25	.24	.24
Counties	.08	.08	.12	.10	.09	.09
Public School Districts	.23	.12	.13	.24	.17	.21
R.C.S.S.D.	.12	.10	.10	.13	.16	.14

[1] Fiscal Appropriations = Supplementary Requisition + Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Inclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 5.12

EQUALIZATION IMPACT OF FISCAL APPROPRIATIONS[1] BY YEAR AS GIVEN BY THE GINI COEFFICIENT

	Gini Coefficient					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	.018	.022[3]	.028	.020	.021	.015
Divisions	-.002[3]	.005[3]	.038	.032	.026	.029
Counties	.016[3]	.014	.017	.001[3]	-.002[3]	.001[3]
Public School Districts	.025	.021	.030	.027	.028	.034
R.C.S.S.D.	.034	.030	.031	.030	.032	.037

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[1] Fiscal Appropriations = Supplementary Requisition + Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Inclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

[3] Lorenz curve crosses the diagonal line.

funds in total to spend per pupil than the less affluent jurisdictions. The magnitude of this positiveness, however, was minuscule with .038 the largest recorded value.

In addition, there has been an increase in the value of the Gini coefficient since 1975 for counties, public school districts, and separate school districts. This increase, nevertheless, was of limited proportion; for example, the greatest increment experienced by public school districts from 1975 to 1980 was .9 units.

Provincial Appropriations

As was evident in the previous analysis, no distinction was made between provincial and local appropriations. In this part of the analysis, the concern is with the equalization effect of provincial funds alone. The funds included in this category consisted of the eight categorical grants and the provincial contribution to the foundation fund; that is, the mandatory local levy under the School Foundation Program Fund regulations was treated as a local tax as opposed to a provincial tax.

Wealth correlations. Coefficients of correlation between jurisdiction wealth and provincial grant appropriations for the years 1975 to 1980 are given in Table 5.13. Public school districts during this period consistently established a moderate (−.57) to high (−.94) negative and statistically significant relationship between their equalized assessed valuation per eligible pupil and the grant appropriations received from the province. School divisions, on the other hand, showed no significant relationship between wealth and provincial grant appropriations. Overall, however, the absolute value of the coefficients tended to increase, which appeared to indicate a strengthening of the relationship between jurisdiction wealth and provincial allocations. That is, for all school jurisdictions combined and counties, public school districts, and separate school districts, in particular, the more wealthy a jurisdiction the lower the amount of allocated provincial funds.

Coefficient of variation. Coefficients of variation in provincial grant allocations per eligible pupil on the basis of the type of jurisdiction are given in Table 5.14 for the years 1975 to 1980. As indicated by this table, the level of variation was low indicating that there was little discrepancy in funds received by the different school jurisdictions. Not only were the values of the coefficients low but the degree of change from one

TABLE 5.13

CORRELATION COEFFICIENTS OF THE RELATIONSHIP BETWEEN JURISDICTIONAL WEALTH AND PROVINCIAL APPROPRIATIONS[1]

Types of Jurisdictions	Correlation Coefficient					
	1975	1976	1977	1978	1979	1980
All Jurisdictions[2] (N = 128 to 136)	−.137	.037	.012	−.441***	−.546***	−.457***
Divisions (N = 29 to 30)	−.136	−.044	.225	.205	.100	.167
Counties (N = 30)	−.326*	−.293	−.035	−.288	−.446**	−.432**
Public School Districts (N = 21 to 27)	−.570***	−.775***	−.661***	−.939***	−.921***	−.802***
R.C.S.S.D. (N = 41 to 43)	−.208	−.148	−.266*	−.200	−.429**	−.478***

[1] Provincial Appropriations = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Exclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

*$p \le .05$

**$p \le .01$

***$p \le .001$

TABLE 5.14

COEFFICIENT OF VARIATION FOR PROVINCIAL APPROPRIATIONS[1] PER ELIGIBLE PUPIL BY YEAR

	Coefficient of Variation					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	.21	.20	.17	.21	.21	.19
Divisions	.24	.24	.18	.20	.20	.17
Counties	.09	.09	.09	.11	.11	.11
Public School Districts	.30	.31	.28	.31	.31	.30
R.C.S.S.D.	.11	.09	.08	.12	.17	.14

[1] Provincial Appropriations = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Exclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

year to the next was minuscule. Public school districts appeared to have the highest level of variation while counties tended to have the least discrepancy in the distribution of provincial funds per eligible pupil; i.e., county school systems received provincial assistance within nine percent of the mean for all counties in 1975 through 1977 and within 11 percent from 1978 to 1980. Public school systems, on the other hand, received funds within 30 percent (1980) of the mean allocation to all public school districts.

Gini coefficient. The Gini coefficients representing the extent to which provincial grant allocations to local school jurisdictions were equalizing are given in Table 5.15. Negative values were recorded for the coefficients indicating that poorer jurisdictions were the recipients of greater provincial appropriations than the more wealthy jurisdictions. As indicated earlier, the negative sign of the Gini coefficient is not to be interpreted in the strict mathematical sense. Therefore, to avoid confusion the sign will be reversed to make it positive and the absolute value of the coefficient will be referred to for the purpose of the analysis.

With the exception of school divisions, which suffered a decrease in the absolute value of the Gini coefficient ($G = .064$ to $G = .038$), there has been a gradual increase in the value of the Gini coefficient since 1975. In fact, by 1980 the Gini coefficients had more than doubled in value.

Local Appropriations

In this part of the analysis, the concern is with the equalizing tendency of local appropriations as opposed to the above concern with provincial appropriations. Included within this category are funds generated by the local supplementary requisition and the mandatory foundation levy.

Wealth correlations. Coefficients of correlation between jurisdiction wealth and local appropriations are given in Table 5.16 for the years 1975 to 1980. As indicated by this table, positive and statistically significant relationships were established for each type of jurisdiction (school divisions, counties, public and separate school districts) as well as for all jurisdictions combined ($r = .77$, $p \leq .001$ to $r = .97$, $p \leq .001$). Therefore, as the wealth of the jurisdiction increased so did the amount of funds generated at the local

TABLE 5.15

EQUALIZATION IMPACT OF PROVINCIAL APPROPRIATIONS[1] BY YEAR AS GIVEN BY THE GINI COEFFICIENT

Types of Jurisdictions	Gini Coefficient					
	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	-.049	-.047	-.049	-.065	-.072	-.077
Divisions	-.064	-.060	-.022	-.030	-.037	-.038
Counties	-.020[3]	-.026[3]	-.025	-.044	-.052	-.052
Public School Districts	-.010[3]	-.012	-.016	-.022	-.028	-.013[3]
R.C.S.S.D.	-.015	-.016	-.020	-.023	-.032	-.031

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[1] Provincial Appropriations = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Exclusive of the Mandatory Levy)

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

[3] Lorenz curve crosses the diagonal line.

TABLE 5.16

CORRELATION COEFFICIENTS OF THE RELATIONSHIP BETWEEN JURISDICTIONAL WEALTH AND LOCAL APPROPRIATIONS[1]

	Correlation Coefficient					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2] (N = 128 to 136)	.946***	.952***	.952***	.942***	.935***	.820***
Divisions (N = 29 to 30)	.941***	.948***	.951***	.953***	.949***	.941***
Counties (N = 30)	.874***	.870***	.886***	.837***	.816***	.769***
Public School Districts (N = 21 to 27)	.934***	.957***	.974***	.936***	.931***	.802***
R.C.S.S.D. (N = 41 to 43)	.951***	.947***	.962***	.968***	.942***	.902***

[1] Local Appropriations = Supplementary Requisition + Mandatory Foundation Levy

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

***$p \leq .001$

level for the jurisdiction's use. Though the coefficients have remained highly significant over the years, their values have decreased slightly since 1975.

Coefficient of variation. Coefficients of variation in local appropriations per eligible pupil are given in Table 5.17 for the years 1975 to 1980. As indicated by this table, the level of variation in local appropriations has decreased since 1975. The exception to this movement was observed in separate school districts where a value of .66 was retained at the end of six years with minor fluctuations in the interim years. Counties retained the lowest level of variation ranging from .34 in 1975 to a high of .40 in 1977 and dropping to a low of .24 in 1980. This level of variation within counties was at least half the variability experienced by other school jurisdictions.

Gini coefficient. The Gini coefficients representing the extent to which local appropriations to school jurisdictions were equalizing are given in Table 5.18. Positive values were recorded for all coefficients indicating, as mentioned earlier, that the wealthy jurisdictions had more funds per pupil than their poorer counterparts. The magnitude of this positiveness was small with values ranging from .084 to .219. Furthermore, there was a decrease in the value of the coefficients for all jurisdictions combined as well as type of jurisdiction from 1975 to 1980, although slight rises were apparent in the interim four years.

Discussion

The correlation coefficient, the coefficient of variation and the Gini coefficient analytical techniques were utilized in the preceding analyses to illustrate the pattern in which provincial and local funds were allocated to school jurisdictions in terms of the jurisdictions' equalized assessment per eligible pupil.

Several interesting patterns emerged when the movements of wealth correlations over time were examined (Figure 5.1). In 1978, the correlation coefficients for the relationships between total allocated funds and wealth and the foundation fund and wealth dropped considerably, and the two relationships moved together over time, with an intercorrelation of the two sources of funds of .97 ($\underline{p} \leq .001$). Plausible reasons for the unanticipated dropped in value of the correlation coefficient in 1978 would seem to demand further examination. There was a very small relationship between the wealth of

TABLE 5.17

COEFFICIENT OF VARIATION FOR LOCAL APPROPRIATIONS[1] PER ELIGIBLE PUPIL BY YEAR

	Coefficient of Variation					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	.90	.79	.68	.81	.69	.66
Divisions	.70	.67	.60	.59	.54	.53
Counties	.34	.34	.40	.28	.27	.24
Public School Districts	1.03	.96	.70	.87	.71	.72
R.C.S.S.D.	.66	.58	.61	.59	.67	.66

[1] Local Appropriations = Supplementary Requisition + Mandatory Foundation Levy

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 5.18

EQUALIZATION IMPACT OF LOCAL APPROPRIATIONS[1] BY YEAR AS GIVEN BY THE GINI COEFFICIENT

	Gini Coefficient					
Types of Jurisdictions	1975	1976	1977	1978	1979	1980
All Jurisdictions[2]	.187	.186	.190	.181	.175	.153
Divisions	.217	.219	.215	.202	.179	.166
Counties	.137	.140	.130	.119	.112	.102
Public School Districts	.089	.079	.099	.094	.095	.084
R.C.S.S.D.	.181	.165	.167	.156	.165	.159

[1] Local Appropriations = Supplementary Requisition + Mandatory Foundation Levy .

[2] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

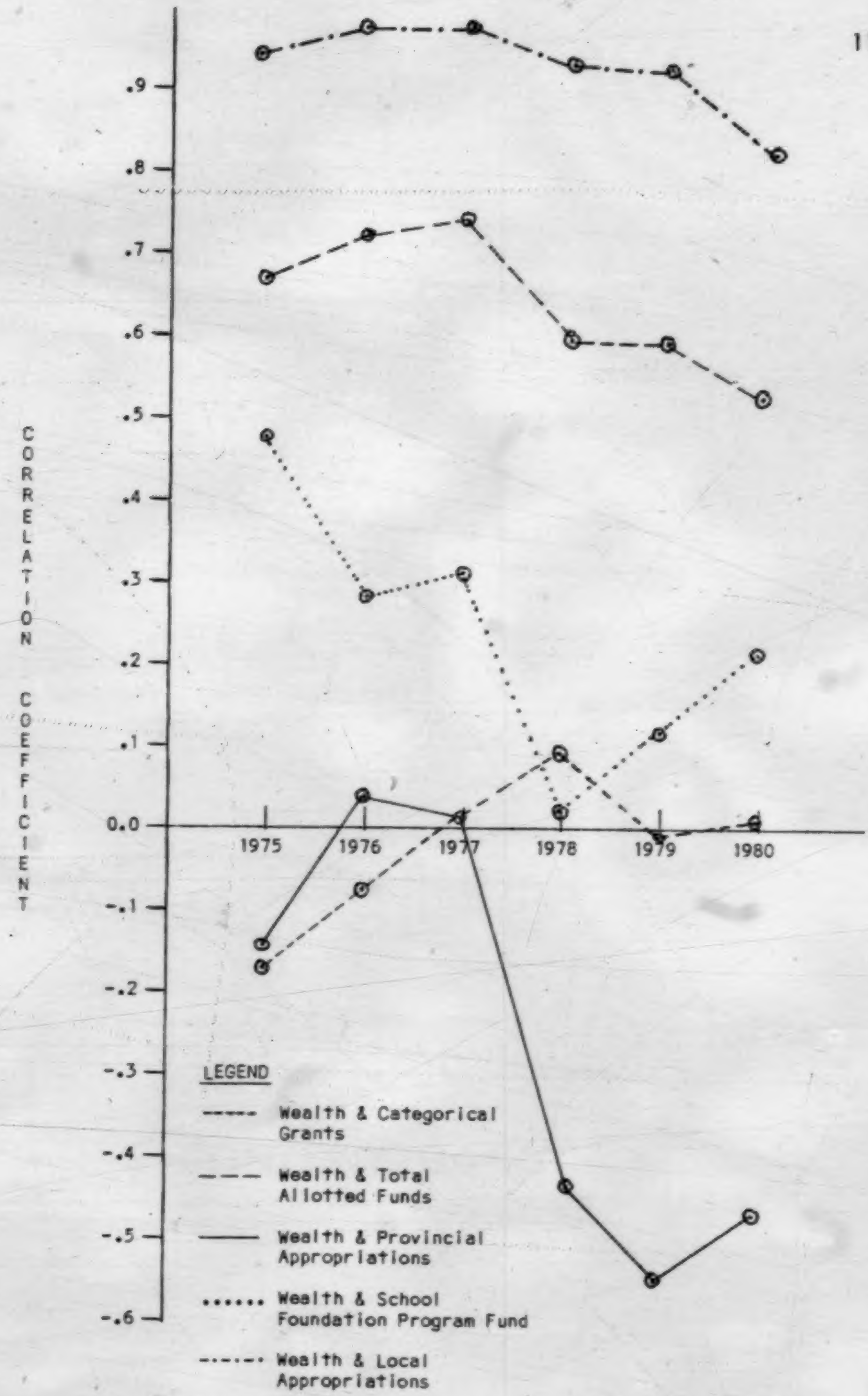

FIGURE 5.1

THE CORRELATIONS OF JURISDICTIONAL WEALTH AND RELEVANT VARIABLES PER ELIGIBLE PUPIL school jurisdictions and allocated categorical grants. In 1977, 1979, and 1980 this relationship was virtually zero. On the other hand, local appropriations were very highly and positively related to jurisdiction wealth. In addition, local appropriations correlated weakly with other appropriations. This is somewhat surprising since one would have projected a significantly high negative correlation between local and provincial appropriations when efforts are directed toward the achievement of equalization. In contrast, provincial grant allotments were negatively related to wealth. This negativeness was at its most extreme in 1979 (_r_ = -.55).

As reflected by the coefficient of variation, there was little variation in allocated funds to local school jurisdictions when either the entirety of allocated funds or only the provincial portion of such funds were under consideration. The reverse was found to hold true when only the local portion of all available funds were examined. In this instance, the level of variation reached 72 percent.

Thus, the addition of the local allocated amounts to the provincially distributed amount had two distinguishable effects. In the first place, the level of variation in aid received by the various local school jurisdictions was altered minimally. That is, allocated funds (including local portion) to school jurisdictions differed from the mean by approximately 20 percent. Without the local contribution, the level of variation was 19 percent.

The second distinguishable effect observed was that the moderate levels of fiscal equalization achieved by local and provincial appropriations separately were improved when the two amounts were summed and treated in like manner in the application of the Gini coefficient. In other words, where the poorer jurisdictions were in an ambiguous position depending on whether local or provincial funds were the object of consideration, the aggregated situation indicated that equality, to a relatively high degree (especially within counties), was being achieved.

Furthermore, Tables 5.19 and 5.20 indicate that local contributions are representing an increasing portion of the total allocated funds to school jurisdictions. As noted in Table 5.19, provincial appropriations per pupil in relation to local appropriations per pupil has been gradually moving towards parity. For instance, in 1975 provincial appropriations were 2.5 times that of local appropriations but has since decreased to 1.5

TABLE 5.19

APPROPRIATIONS TO LOCAL SCHOOL JURISDICTIONS BY YEAR

	Dollars Per Eligible Pupil					
Appropriations	1975	1976	1977	1978	1979	1980
Grants[1] + SFPF[2] + Supp. Req[3]	1326	1488	1681	1871	2094	2317
Grants + SFPF	1065	1170	1290	1401	1519	1623
Grants + SFPF (Prov)	949	1047	1139	1230	1309	1386
Grants	40	36	41	53	60	71
SFPF (Prov)[4]	909	1011	1098	1177	1249	1316
SFPF (Local) + Supp Req	377	441	541	642	784	930
SFPF (Local)[5]	117	123	150	171	210	237
Supp Req	261	318	391	471	574	693
SFPF (Prov + Local)	1025	1135	1248	1347	1459	1553

[1] Grants = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant
[2] SFPF = School Foundation Program Fund
[3] Supp Req = Supplementary Requisition
[4] SFPF (Prov) = Foundation Fund Exclusive of the Mandatory Levy
[5] SFPF (Local) = Mandatory Foundation Levy

TABLE 5.20

PROVINCIAL - LOCAL FISCAL APPROPRIATION SPLIT

Types of Jurisdictions	1975		1976		1977		1978		1979		1980	
	Prov[1] (%)	Local[2] (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)
All Jurisdictions[3]	72	28	70	30	68	32	66	34	63	37	60	40
Divisions	78	22	77	23	75	25	73	27	71	29	67	33
Counties	77	23	76	24	73	27	72	28	69	31	66	34
Public School Districts	65	35	64	36	61	39	58	42	55	45	52	48
R.C.S.S.D.	75	25	75	25	73	27	71	29	67	33	64	36
Others	85	15	86	14	86	14	68	32	77	23	76	24

[1] Provincial = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program (Exclusive of the Mandatory Levy)

[2] Local = Supplementary Requisition + Mandatory Foundation Levy

[3] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

times the local share. This decrease in provincial funding is further substantiated by Table 5.20. This apparent trend in funding practices, however, must not be interpreted to the extreme. Though local funds are becoming more salient the dominant source of funds for local school jurisdictions remains the provincial contribution by a ratio of 6 to 1.

SUMMARY

This chapter has presented a historical look at the fiscal equalizing effect of nine provincial grants, combined, in terms of mills of tax relief and in terms of the wealth of the local school jurisdictions. The findings revealed that in terms of mills of tax relief the separate school districts received the greatest amount of assistance. Furthermore, in terms of wealth, these districts were smaller and had lower equalized assessments per pupil than most of the remaining jurisdictions. In addition, provincial funds tended to be directed to where the local fiscal ability was lowest. Even so, provincial funds are representing a declining percentage of the total revenue at the disposal of school jurisdictions and as indicated in the above text, the more predominant local appropriations are in relation to total revenue, the lower the level of equalization obtained among school jurisdictions.

CHAPTER 6

PREDICTORS OF CATEGORICAL GRANTS PER ELIGIBLE PUPIL

The previous chapter demonstrated the fiscal equalizing effect of the existing provincial education finance plan on two dimensions: (1) the level of support allocated to each local school jurisdiction in terms of mills of tax relief and (2) the level of support allocated in relation to the wealth or fiscal ability of the local school jurisdictions. The purpose of the current chapter is to determine what factors, if any, were contributing to the fiscal equalizing tendency of the provincial finance plan. The approach adopted was multiple regression analysis. The contribution of various defined factors (variables) was determined by the data analysis associated with the problem:

> *What are the characteristics in terms of ability-to-pay, tax effort, and educational need of the school jurisdictions receiving differing levels of provincial support?*

The significant contribution of the two variables eligible enrolment and equalized assessment per eligible pupil to the variance in the allocated level of categorical grants per eligible pupil is discussed below. The discussion is presented from two points of reference: (1) the calendar years 1975 to 1980 and (2) the type of school jurisdiction (school divisions, counties, public school districts, and separate school districts).

PREDICTORS OF CATEGORICAL GRANTS PER ELIGIBLE PUPIL BY YEAR

This section discusses the contribution of the two independent variables eligible enrolment and equalized assessment per eligible pupil to the variance in allotted provincial funds from 1975 to 1980. Provincial funds were restricted to the sum of the eight categorical grants; namely, the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Private School Opening Grant, and the Incremental Grant.

The variance in categorical grants per eligible pupil accounted for by the two independent variables is given in Table 6.1 for each of the six years. A year by year description of this relationship follows.

1975

In 1975, the combined effect of the two independent variables was small in magnitude. The R for these two variables was .171 which was significant beyond .05. The percent of variance accounted for by the two variables was 2.9.

Equalized assessment per eligible pupil accounted for 2.4 percent of the variance in the criterion variable and was statistically significant ($p \leq .05$). The variance accounted for by eligible enrolment (.5 percent) was not significant.

1976

As was found to be the case in 1975, the variance in categorical grants per eligible pupil attributable to the independent variables eligible enrolment and equalized assessment per eligible pupil was minuscule. The cumulative correlation (R) was .112 which was again significant beyond .05. The percent of variance accounted for by the two variables was 1.3.

Eligible enrolment accounted for 1.1 percent of the variance in allocated categorical grants per eligible pupil and was not statistically significant. The variance accounted for by equalized assessment per eligible pupil (.2 percent) was also not significant.

1977

The earlier established relationship between categorical grants per eligible pupil and the two independent variables continued in 1977. The R for these two variables was .171 and was not statistically significant. The percent of variance accounted for by the two independent variables was 2.9.

Eligible enrolment accounted for 2.7 percent of the variance in allocated categorical grants per eligible pupil and was statistically significant ($p \leq .05$). The variance accounted for by equalized assessment per eligible pupil (.2 percent) was not

TABLE 6.1

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

Year	Step	Variable Entered	R	df	F	B	Beta	R²	R² Change	r
1975 (N = 144)										
	1	Eqassess/Pupil	.155	142	3.480	-.002*	-.141*	.024	.024	-.155
	2	Eligenrol	.171	141	2.120	-.001	-.074	.029	.005	-.099
1976 (N = 139)										
	1	Eligenrol	.103	137	1.481	-.001	-.099	.011	.011	-.103
	2	Eqassess/Pupil	.112	136	.863	-.001	-.043	.013	.002	-.053
1977 (N = 139)										
	1	Eligenrol	.164	137	3.784*	-.002*	-.172*	.027	.027	-.164
	2	Eqassess/Pupil	.171	136	2.057	.001	.051	.029	.002	.021
1978 (N = 143)										
	1	Eligenrol	.190	141	5.293*	-.003**	-.204**	.036	.036	-.190
	2	Eqassess/Pupil	.222	140	3.612*	.140	.114	.049	.013	.089
1979 (N = 144)										
	1	Eligenrol	.212	142	6.662**	-.004**	-.217**	.045	.045	-.212
	2	Eqassess/Pupil	.214	141	3.397*	.001	.034	.046	.001	.002
1980 (N = 139)										
	1	Eligenrol	.250	137	9.128**	-.005**	-.255**	.062	.062	-.250
	2	Eqassess/Pupil	.253	136	4.661**	.000	.041	.064	.002	.011

Equassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

*$p \leq .05$

**$p \leq .01$

***$p \leq .001$

significant.

1978

The minimal relationship between the criterion variable and the two independent variables continued in the year 1978. The _R_ for these variables was .222 and was not statistically significant. The percent of variance accounted for by the two variables was 4.9.

Eligible enrolment accounted for 3.6 percent of the variance in the criterion variable and was statistically significant ($p \leq .01$). The variance accounted for by equalized assessment per eligible pupil (1.3 percent) was not significant.

1979

No change in the general findings of earlier years was evident in the year 1979. The cumulative correlation (_R_) was .214 which was significant at the .05 level. The percent of variance accounted for by the two independent variables was 4.6.

Eligible enrolment accounted for 4.5 percent of the variance in allocated categorical grants per eligible pupil and was statistically significant ($p \leq .01$). The variance accounted for by equalized assessment per eligible pupil (.1 percent) was not significant.

1980

For 1980, the findings in relation to the contribution of the two independent variables to the variance in categorical grants per eligible pupil were similar to the findings of the previous five years. The _R_ for the combined independent variables was .253 which was significant at the .01 level. The percent of variance accounted for by the two variables was 6.4.

Eligible enrolment accounted for 6.2 percent of the variance in allocated categorical grants per eligible pupil and was statistically significant ($p \leq .01$). The variance accounted for by equalized assessment per eligible pupil (.2 percent) was not significant.

Discussion

The data indicated that on an annual basis (with the exception of the year 1975) the more important variable accounting for the variance in the distribution of provincial funds is the eligible pupil enrolment count. Even so, the greatest amount of variance accounted for by this variable was 6.2 percent in 1980. It would seem reasonable to infer, therefore, that the distribution of categorical grant monies is minimally affected by the jurisdictional pupil count. This generalization is true as well for the other independent variable, equalized assessment per eligible pupil, which accounted for even a smaller proportion of the total variance.

PREDICTORS OF CATEGORICAL GRANTS PER ELIGIBLE PUPIL BY TYPE OF JURISDICTION

The previous section presented and discussed the findings related to the association between allocated categorical grants per eligible pupil and two identified independent variables for the years 1975 to 1980. The purpose of this section is to examine this same relationship with respect to the types of school jurisdictions involved.

Divisions

The variances in categorical grants per eligible pupil (divisions only) accounted for by the independent variables eligible enrolment and equalized assessment per eligible pupil are presented in Table 6.2. The $\underline{R}$s ranged from .203 in 1977 to .445 in 1975 but only the latter value was statistically significant ($\underline{p} \leq .05$). The maximum percent of variance accounted for by the two variables during this time was 19.8.

An examination of the predictive importance of each of the independent variables, over the six years revealed that the variable equalized assessment per eligible pupil was of more importance in 1975 and 1976 and its contribution was statistically significant. The percent of variance accounted for was 11.1 in 1975 and 8.1 in 1976. Eligible enrolment contributed significantly to the variance in the criterion variable only in the year 1980. The percent of variance accounted for was 8.3.

TABLE 6.2

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

(DIVISIONS)

Year	Step	Variable Entered	R	df	F	B	Beta	R^2	R^2 Change	r
1975 (N = 30)										
	1	Eqassess/Pupil	.334	28	3.506	-.016**	-.503**	.111	.111	-.334
	2	Eligenrol	.445	27	3.326*	-.064*	-.339*	.198	.087	-.088
1976 (N = 30)										
	1	Eqassess/Pupil	.284	28	2.462	-.015*	-.420*	.081	.081	-.284
	2	Eligenrol	.388	27	2.395	-.061	-.297	.151	.070	-.105
1977 (N = 30)										
	1	Eligenrol	.149	28	.637	-.032	-.220	.022	.022	-.149
	2	Eqassess/Pupil	.203	27	.580	-.004	-.155	.041	.019	-.054
1978 (N = 30)										
	1	Eligenrol	.202	28	1.195	-.044	-.273	.041	.041	-.202
	2	Eqassess/Pupil	.260	27	.980	-.004	-.178	.068	.027	-.070
1979 (N = 30)										
	1	Eligenrol	.242	28	1.745	-.050	-.285	.059	.059	-.242
	2	Eqassess/Pupil	.268	27	1.044	-.003	-.122	.072	.013	-.024
1980 (N = 29)										
	1	Eligenrol	.288	27	2.437	-.042*	-.352*	.083	.083	-.288
	2	Eqassess/Pupil	.339	26	1.691	-.003	-.191	.115	.032	-.072

Eqassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

*$p \leq .05$

**$p \leq .01$

Counties

Table 6.3 shows the summary of results of the regression procedure for counties only. An examination of these data reveal that both eligible enrolment and equalized assessment per eligible pupil contributed significantly to the variance in categorical grants per eligible pupil to these jurisdictions.

In the years 1975 and 1976, equalized assessment per eligible pupil was the more important variable accounting for 44.4 percent and 51.8 percent, respectively, of the variance in categorical grants per eligible pupil. For the next three years, eligible enrolment was the more important variable. During this time period, eligible enrolment accounted for between 16.2 percent and 32.9 percent of the variance in categorical grants per eligible pupil. The order of importance of the two independent variables was once again reversed in 1980. At this time, equalized assessment per eligible pupil accounted for 30.3 percent of the variance with eligible enrolment accounting for an additional 15.2 percent.

Further, from one-quarter to three-fifths of the variance in grants per eligible pupil was accounted for by the combined effect of the counties' eligible enrolment count and their equalized assessment per eligible pupil.

Public School Districts

Table 6.4 shows a summary of the results of the regression procedure for public school districts only. The _R_s for the two independent variables ranged from .429 (1975) to .727 (1976) and were statistically significant. The percent of variance accounted for was 18.4 in 1975 and 52.9 in 1976.

Equalized assessment per eligible pupil was consistently the more important variable. This variable accounted for 8.9 percent of the variance in the categorical grants per eligible pupil in 1975. After five years, this percentage had increased to 38.9 percent.

Separate School Districts (R.C.S.S.D.)

Table 6.5 shows a summary of the results of the regression procedure for separate school districts only. The _R_s ranged from .301 (1975) to .441 (1980) with only

TABLE 6.3

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

(COUNTIES)

Year	Step	Variable Entered	*R*	*df*	*F*	*B*	Beta	R^2	R^2 Change	*r*
1975 (N = 30)										
	1	Eqassess/Pupil	.666	28	22.321***	-.008***	-.716***	.444	.444	-.666
	2	Eligenrol	.720	27	14.506***	-.004*	-.277*	.518	.074	-.148
1976 (N = 30)										
	1	Eqassess/Pupil	.719	28	30.032***	-.008***	-.742***	.518	.518	-.719
	2	Eligenrol	.779	27	20.879***	-.004**	-.301**	.607	.089	-.245
1977 (N = 30)										
	1	Eligenrol	.403	28	5.423*	-.006**	-.419**	.162	.162	-.403
	2	Eqassess/Pupil	.521	27	5.033*	-.003*	-.331*	.272	.110	-.310
1978 (N = 30)										
	1	Eligenrol	.427	28	6.252*	-.011*	-.372*	.183	.183	-.427
	2	Eqassess/Pupil	.555	27	6.012**	-.009*	-.359*	.308	.125	-.416
1979 (N = 30)										
	1	Eligenrol	.574	28	13.737***	-.011**	-.473**	.329	.329	-.574
	2	Eqassess/Pupil	.691	27	12.325***	-.006**	-.398**	.477	.148	-.518
1980 (N = 30)										
	1	Eqassess/Pupil	.550	28	12.166**	-.007**	-.446**	.303	.303	-.550
	2	Eligenrol	.675	27	11.287***	-.011**	-.404**	.455	.152	-.520

Eqassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

*$p \le .05$

**$p \le .01$

***$p \le .001$

TABLE 6.4

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

(PUBLIC SCHOOL DISTRICTS)

Year	Step	Variable Entered	R	df	F	B	Beta	R^2	R^2 Change	r
1975 (N = 32)										
	1	Eqassess/Pupil	.299	30	2.941	.001*	.351*	.089	.089	.299
	2	Eligenrol	.429	29	3.267*	-.001*	-.312*	.184	.095	.253
1976 (N = 27)										
	1	Eqassess/Pupil	.635	25	16.861***	.002***	.660***	.403	.403	.635
	2	Eligenrol	.727	24	13.465***	-.001**	-.356**	.529	.126	-.309
1977 (N = 27)										
	1	Eqassess/Pupil	.396	25	4.648*	.003*	.442*	.157	.157	.396
	2	Eligenrol	.493	24	3.853*	-.001	-.297	.243	.086	-.230
1978 (N = 32)										
	1	Eqassess/Pupil	.600	30	16.907***	.004***	.612***	.360	.360	.600
	2	Eligenrol	.644	29	10.255***	-.002	-.232	.414	.054	-.201
1979 (N = 32)										
	1	Eqassess/Pupil	.516	30	10.889**	.003***	.543***	.266	.266	.516
	2	Eligenrol	.607	29	8.439***	-.002*	-.320*	.368	.102	-.275
1980 (N = 29)										
	1	Eqassess/Pupil	.623	27	17.169***	.003***	.644***	.389	.389	.623
	2	Eligenrol	.692	26	11.943***	-.002*	-.301*	.479	.090	-.258

Eqassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

*$p \le .05$

**$p \le .01$

***$p \le .001$

TABLE 6.5

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

(SEPARATE SCHOOL DISTRICTS)

Year	Step	Variable Entered	R	df	F	B	Beta	R^2	R^2 Change	r
1975 (N = 44)										
	1	Eqassess/Pupil	.266	42	3.198	-.002	-.177	.071	.071	-.266
	2	Eligenrol	.301	41	2.037	-.001	-.166	.090	.020	-.261
1976 (N = 43)										
	1	Eqassess/Pupil	.267	41	3.138	-.004	-.185	.071	.071	-.267
	2	Eligenrol	.305	40	2.048	-.002	-.169	.093	.022	-.258
1977 (N = 44)										
	1	Eligenrol	.288	42	3.712	-.003	-.215	.083	.083	-.288
	2	Eqassess/Pupil	.318	41	2.247	-.003	-.153	.101	.018	-.255
1978 (N = 43)										
	1	Eligenrol	.327	41	4.918*	-.006*	-.301*	.107	.107	-.327
	2	Eqassess/Pupil	.331	40	2.463	-.001	-.057	.110	.003	-.195
1979 (N = 44)										
	1	Eligenrol	.324	42	4.916*	-.010*	-.316*	.105	.105	-.324
	2	Eqassess/Pupil	.324	41	2.410	-.001	-.022	.105	.000	-.131
1980 (N = 44)										
	1	Eligenrol	.362	42	6.335*	-.010*	-.309*	.131	.131	-.362
	2	Eqassess/Pupil	.441	41	4.936**	-.003*	-.257*	.194	.063	-.321

Eqassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

*$p \leq .05$

**$p \leq .01$

the R value of .441 statistically significant ($p \leq .01$). The percent of variance accounted for in 1980 was 19.4.

An examination of the predictive importance of each of the independent variables revealed a pattern similar to that found for school divisions. In both instances, the variable equalized assessment per eligible pupil was the more important variable in 1975 and 1976 with its importance taking a secondary position from 1977 to 1980. The contribution of the independent variables did not reach a level of significance until 1978 at which time eligible enrolment was significant at the .05 level. The variation in categorical grants per eligible pupil accounted for was 10.7 percent. By 1980, eligible enrolment accounted for 13.1 percent of the variance.

Others

Table 6.6 shows a summary of the regression procedure for the aggregation of consolidated school districts, protestant separate school districts, and roman catholic public school districts. An examination of the data revealed that neither independent variable contributed significantly to the variance in the allocated categorical grants per eligible pupil. Together the two independent variables accounted for only 4.3 percent of the variance in 1975 with the percentage increasing to 39.1 percent in 1980.

Discussion

The data indicated that on a jurisdiction basis the more important variable accounting for the variation in the distribution of provincial funds in the early years was equalized assessment per eligible pupil. This finding is in contrast to previous reported findings where eligible enrolment was found to be the more salient variable when the calendar year rather than type of jurisdiction was used as the basis for analysis. In later years the variable of greatest importance, on the basis of type of jurisdiction, was not consistent among school divisions, counties, and public and separate school districts. The predictive powers of the independent variables tended to decrease from 1975 to 1980 for school divisions and counties and increase for public and separate school districts. Specifically, the two independent variables taken together accounted for 19.8 percent (school divisions), 51.8 percent (counties), 18.4 percent (public school districts), 9.0

TABLE 6.6

SUMMARY OF REGRESSION ANALYSIS FOR THE DEPENDENT VARIABLE CATEGORICAL GRANTS PER ELIGIBLE PUPIL FROM 1975 TO 1980

(CONSOLIDATED, PROTESTANT SEPARATE, AND ROMAN CATHOLIC PUBLIC SCHOOL DISTRICTS)

Year	Step	Variable Entered	R	df	F	B	Beta	R^2	R^2 Change	r
1975 (N = 8)										
	1	Eligenrol	.201	6	.253	-.013	-.209	.041	.041	-.201
	2	Eqassess/Pupil	.208	5	.114	-.001	-.055	.043	.002	-.025
1976 (N = 9)										
	1	Eqassess/Pupil	.175	7	.222	.001	.149	.031	.031	.175
	2	Eligenrol	.221	6	.154	-.007	-.137	.049	.018	-.166
1977 (N = 9)										
	1	Eqassess/Pupil	.182	7	.240	.003	.228	.033	.033	.182
	2	Eligenrol	.272	6	.240	-.011	-.208	.074	.041	-.157
1978 (N = 8)										
	1	Eligenrol	.345	6	.811	-.015	-.306	.119	.119	-.345
	2	Eqassess/Pupil	.364	5	.381	-.001	-.122	.132	.013	-.220
1979 (N = 8)										
	1	Eligenrol	.426	6	1.330	-.027	-.431	.181	.181	-.426
	2	Eqassess/Pupil	.474	5	.726	-.002	.209	.225	.044	.198
1980 (N = 7)										
	1	Eligenrol	.492	5	1.599	-.024	-.518	.242	.242	-.492
	2	Eqassess/Pupil	.626	4	1.286	-.003	-.387	.391	.149	-.352

Eqassess/Pupil = Equalized Assessment Per Eligible Pupil; Eligenrol = Eligible Enrolment

Significance level beyond .05 in all instances percent (separate school districts), and 4.3 percent (consolidated school districts, protestant separate school districts, and roman catholic public school districts) in 1975. These percentages changed to 11.5 percent, 45.5 percent, 47.9 percent, 19.4 percent, and 39.1 percent, respectively, in 1980. As can be seen from these percentages, the greatest increase in the predictive power of the aggregated independent variables from 1975 to 1980 was 29.5 percent for public school districts and the greatest decrease was experienced within school divisions (8.3 percent). These changes compared to an increase of 3.5 percent when all jurisdictions were combined and examined on the basis of calendar years.

Thus, as is evident from the above discussion, the significance of the contribution of either of the two independent variables was contingent upon the year and/or the type of jurisdiction. The predictive power of the two variables taken together reaching a high of 60.7 percent in 1976 for the distribution of funds to county school systems.

SUMMARY

This chapter has presented the findings associated with the problem of determining which variables, if any, were contributing to the extent to which equalization was obtained among local school jurisdictions in Alberta. Two variables were identified, specifically, equalized assessment per eligible pupil and eligible enrolment. Making no distinction between the types of jurisdictions and thereby limiting the investigation to the calendar years 1975 to 1980, the contribution of either variable to the variance in allotted categorical grants per eligible pupil was less than 10 percent. Expanding the analysis to account for the different types of school jurisdictions (i.e., school divisions, counties, and public and separate school districts) this percentage increased to over 50 percent on certain occasions. Thus, the importance of the two independent variables was of greater consequence when the variance of categorical grants to specific types of school jurisdictions was in question.

CHAPTER 7

THE FISCAL EQUALIZING EFFECT OF ALTERNATIVE FINANCING FORMULAS

The fiscal equalizing effect of the funding mechanism operative in the Province of Alberta for the years 1975 to 1980 was examined in Chapter 5. Though no major criticism of the finance plan can be drawn on the basis of the findings in Chapter 5, isolated situations and circumstances indicated weaknesses within the existing finance plan. For example, some school jurisdictions with an equalized assessment per pupil of more than four times that of other jurisdictions received greater amounts of financial assistance from the province than less wealthy jurisdictions. Consequently, instead of narrowing the gap in fiscal ability among jurisdictions the existing plan in some circumstances tended to widen the gap. The purpose of this chapter is to present the findings of the tests of two possible alternatives to the existing plan. These tests were conducted in response to the problem (Problem 2):

> *Would the implementation of a different grant funding mechanism achieve significantly improved results over the present provincial allocation plan?*

The investigation of the above problem was approached by replacing the existing finance plan first with a power equalizing finance plan and then with a percentage equalizing finance plan. The effects that each of these alternative plans had on the existing state of equalization among local school jurisdictions are presented below.

Revenue reallocated under the power equalizing plan or the percentage equalizing plan consisted of the summation of the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Location Allowance Grant, the Private School Opening Grant, the Corporate Assessment Grant, the Incremental Grant, and the School Foundation Program Fund.

POWER EQUALIZING

What is the degree of fiscal equalization obtained under a power equalizing plan?

This section first presents a description of the allocated provincial level of support to local school jurisdictions by way of a power equalizing plan. Secondly, the fiscal equalizing effect of the power equalizing plan in relation to the existing finance plan is examined under two different assumptions. The first assumption required the total amount of revenue (provincial plus local) a given school jurisdiction had per pupil to remain the same under both the existing and power equalizing plans. The second assumption accepted the amount requisitioned by the local school jurisdiction under the existing plan to also represent the local tax effort under a power equalizing plan.

Characteristics of the Power Equalizing Plan

Table 7.1 gives the minimum amounts guaranteed to a jurisdiction under power equalization for each mill the jurisdiction levied on its ratepayers for the period 1975 to 1980. The amount varies from year to year since the total amount of revenue (provincial plus local) available for the support of education changed annually. Therefore, under power equalization a jurisdiction levying a tax rate of *x* mills in 1979 would have at least *x* times $102.13 per pupil in funds whereas the same jurisdiction levying a tax rate of *x* mills in 1980 would have *x* times $83.13 per pupil in available funds. If the locally generated funds were less than the calculated amount the balance would represent the provincial share.

Revenue Per Pupil Fixed

Requiring that no school jurisdiction received more or less funds when the existing plan was replaced by a power equalizing plan, necessitated all jurisdictions to either increase or decrease their tax requisition on the local ratepayer. As given by Table 7.2, most school jurisdictions in 1975 (56 percent), 1978 (66 percent), and 1980 (82 percent) were required to lower their local tax requisition under power equalization and still maintain their revenue level per pupil. This change in local tax effort was most noticeable in 1980 where 106 school jurisdictions or 82 percent would have been

TABLE 7.1

MINIMUM REVENUE PER PUPIL FOR EACH MILL LEVIED LOCALLY UNDER A POWER EQUALIZING PLAN

Year	$/mill
1975	*$ 99.69*
1976	*124.17*
1977	*116.51*
1978	*110.08*
1979	*102.13*
1980	*83.13*

required to exert less of a tax effort to secure the same amount of funds (provincial plus local) per pupil. The required increase in local tax effort of the remaining school jurisdictions were similar to these 106 jurisdictions except in the case of public school districts and school divisions. In each of these latter two cases, the average tax rate increase was more than double the average decrease in required local tax effort. A more detail jurisdiction breakdown on the changes in local tax rates when the existing plan is replaced by power equalization is given in Table D.1 of Appendix D.

Tables 7.3 through 7.5 demonstrates the above changes in local tax rate and the corresponding effects such changes had on the distribution of provincial aid for selected school jurisdictions in the years 1975, 1978 and 1980. The jurisdictions selected are representative of jurisdictions whose actual mill rates were lower, higher or approximately equivalent to the provincial average.

1975. Financial effects of replacing the existing plan with a power equalizing plan for selected school jurisdictions in 1975 are illustrated in Table 7.3. As indicated by this table, the local tax efforts under the existing plan were unrelated to the total amount of funds school jurisdictions had to spend per pupil. In other words, allocated provincial funds were not closely related to the levied local mill rate. For example, under the

TABLE 7.2

NUMBER OF SCHOOL JURISDICTIONS REQUIRED TO INCREASE OR DECREASE THEIR LOCAL MILL RATE WHEN THE EXISTING PLAN IS REPLACED BY POWER EQUALIZATION[1]

Types of Jurisdictions	Local Mill Rate											
	1975				1978				1980			
	Up		Down		Up		Down		Up		Down	
	#	(Change)[2]	#	(Change)	#	(Change)	#	(Change)	#	(Change)	#	(Change)
Divisions	16	(+4.80)	14	(−4.51)	15	(+5.76)	15	(−5.59)	3	(+14.32)	26	(−4.67)
Counties	9	(+2.65)	21	(−2.83)	8	(+4.54)	22	(−3.59)	5	(+3.28)	25	(−4.10)
Public School Districts	18	(+3.27)	9	(−7.64)	10	(+20.53)	17	(−5.19)	7	(+11.73)	17	(−4.85)
R.C.S.S.D.	14	(+5.00)	28	(−4.78)	9	(+5.07)	33	(−6.15)	6	(+3.49)	35	(−3.14)
Others[3]	3	(+6.25)	3	(−6.01)	3	(+8.21)	1	(−4.96)	3	(+3.95)	3	(−4.55)
Total	60	(+3.73)	75	(−4.57)	45	(+8.85)	88	(−5.22)	24	(+7.26)	106	(−5.21)

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[1] Data represents a summary of changes given in Table D.1 of Appendix D where jurisdiction revenues were held constant.

[2] Average change in local mill rate under power equalization.

[3] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 7.3

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICTION REVENUES FOR THE YEAR 1975

			Mill Rate		Provincial Aid / Pupil					
					A1[5]			A2[6]		
Number[1]	Jurisdiction	R.P.[2]	Existing[3]	Power[4]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC84	Valleyview	1452	6.60	21.20	1363	1271	-92	1411	1319	-92
RC30	McLennan	1063	7.79	15.52	997	964	-33	1029	996	-33
Dist102	Banff	1287	8.51	18.78	497	143	-354	994	640	-354
RC97	Vermilion	1074	8.81	15.68	1018	996	-22	1045	1023	-22
Dist7	Edmonton	1384	19.57	20.20	875	864	-11	1013	1001	-12
RC23	Theresetta	986	19.69	14.39	921	933	+12	942	954	+12
Div41	Rocky View	1313	19.69	19.17	983	988	+5	1106	1111	+5
RC54	Taber	1100	19.84	16.06	939	959	+20	997	1017	+20
Dist4910	Grovedale	1182	26.56	17.26	1076	1096	+20	1126	1146	+20
Div4	Medicine Hat	2223	28.66	32.45	1040	930	-110	1393	1282	-111
Cty4	Newell	1423	29.15	20.76	954	1039	+85	1126	1211	+85
Div12	Yellowhead	1345	32.21	19.63	1014	1104	+90	1113	1203	+90

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District

[2] R.P. = Revenue Per Pupil

[3] Provincial Average = 19.76 mills

[4] Provincial Average = 19.36 mills

[5] A1 --Assumes Mandatory Foundation Levy is a Local Tax

[6] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

assumption that the mandatory foundation levy is a local tax, Banff School District No. 102 with a local tax effort of 8.51 mills received $497 per pupil from the province to bring its total revenue per pupil to $1287. In comparison, Vermilion R.C.S.S.D. No. 97 with a local tax effort of 8.81 mills received provincial assistance to the extent of $1018 per pupil resulting in a revenue level of $1074 per pupil. Thus, a tax rate difference of .30 mills resulted in a $213 difference per pupil. Under power equalization, both jurisdictions were required to differentiately increase their mill rate while retaining the same level of revenue per pupil. Banff with a revenue level of $1287 per pupil, therefore, would have been required to increase its local tax rate from 8.51 mills to 18.78 mills with a corresponding decrease of $354 per pupil in provincial aid. Vermilion, on the other hand, with a revenue level of $213 per pupil less than Banff would have been required to increase its local tax rate from 8.81 mills to 15.68 mills. This increase in local taxation on the Vermilion ratepayers however resulted in only a $22 per pupil lost in provincial funds.

In addition, school jurisdictions putting forth the same local tax effort did not necessarily have equal funds on a per pupil basis under the existing plan. Exemplifying this situation are the two jurisdictions Theresetta R.C.S.S.D. No. 23 and Rocky View School Division No. 41. Each jurisdiction taxed its ratepayers at a level of 19.69 mills; Rocky View, however, had 1.3 times the revenue per pupil than did Theresetta. When a power equalizing plan was substituted for the existing plan while holding the revenue per pupil constant, the tax rate for Theresetta and Rocky View school systems dropped but by uneven amounts. Under a power equalizing formula, Theresetta was required to levy a tax of 14.39 mills on its ratepayers and Rocky View was required to levy a tax of 19.17 mills instead of the actual levied tax rate of 19.69 mills. This reduction in locally generated funds was balanced by an increase in provincial appropriations.

1978. The effects of power equalization for selected school jurisdictions in 1978 are illustrated in Table 7.4. As was the situation for 1975, a power equalizing plan required either an increase or a decrease in tax effort from the local school jurisdictions then was evident under the existing plan while still securing the same amount of revenue per pupil. For example, if Edmonton Public School District No. 7 was to retain a revenue level of $1981 per pupil under a power equalizing plan, a local tax effort of 28.92 mills was required as opposed to an effort of 27.69 mills under the existing plan. Fort

TABLE 7.4

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICTION REVENUES FOR THE YEAR 1978

					Provincial Aid / Pupil					
			Mill Rate		A1[5]			A2[6]		
Number[1]	Jurisdiction	R.P.[2]	Existing[3]	Power[4]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC84	Valleyview	1673	14.50	24.43	1469	1392	−77	1560	1483	−77
RC90	Whitecourt	1390	14.68	20.29	1234	1200	−34	1300	1266	−34
Div62	Drumheller	1617	16.69	23.59	1356	1282	−74	1440	1367	−73
RC30	McLennan	1988	16.70	29.02	1862	1797	−65	1900	1835	−65
Cty29	Flagstaff	1857	28.19	27.11	1406	1418	+12	1536	1549	+13
Div30	Starland	2121	28.47	30.97	1481	1436	−45	1602	1557	−45
Dist7	Edmonton	1981	27.69	28.92	1061	1031	−30	1299	1269	−30
Cty6	Stettler	2557	29.62	37.33	1697	1539	−158	1945	1786	−159
Div24	Sturgeon	2102	35.85	30.68	1415	1489	+74	1591	1665	+74
Cty4	Newell	2059	41.02	30.05	1325	1466	+141	1528	1670	+142
Div52	Fort Vermilion	2272	43.97	33.16	1927	1988	+61	2027	2088	+61
RC26	Fort Vermilion	1462	57.05	21.35	1298	1372	+74	1344	1418	+74

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] R.P. = Revenue Per Pupil
[3] Provincial Average = 28.11 mills
[4] Provincial Average = 27.32 mills
[5] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[6] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

Vermilion R.C.S.S.D. No. 26, in contrast, was required to decrease its level of taxation from 57.05 mills to 21.35 mills under power equalization in order to retain a revenue level of $1462 per pupil.

As was also evident in 1975, the local mill rate under the existing plan was not closely associated with the operating revenue level of the school jurisdictions. For example, the operating revenue level of Starland School Division No. 30 and Sturgeon School Division No. 24 differed by only $19 per pupil while their mill rates differed by 7.38 mills. Under power equalization, however, in order to retain their respective revenue levels per pupil, Starland would have been required to increase its local tax rate from 28.47 mills to 30.97 mills; with a corresponding drop of $45 per pupil in provincial aid. Sturgeon, in contrast, with a lower revenue level per pupil was required to decrease its local tax rate from 35.85 mills to 30.68 mills. This drop in local tax effort was balanced by a corresponding increase in provincial assistance.

1980. The effects of power equalization for selected school jurisdictions in 1980 are illustrated in Table 7.5. In agreement with earlier years, the local tax effort under the existing finance plan had no apparent relationship with the amount of funds a jurisdiction had to spend on a per pupil basis. For example, Banff School District No. 102 with revenues totaling $3578 per pupil had taxed its ratepayers at a rate of 19.06 mills. At the same time, Fort McMurray School District No. 2833 with revenues totaling $525 less per pupil than Banff's taxed its ratepayers at a rate of 35.33 mills. The application of a power equalizing plan, however, meant that Banff's local tax effort needed to be the equivalence of 38.07 mills, a rise of 19.01 mills, whereas Fort McMurray's rate would have been 32.48 mills, a decrease of only 2.85 mills, if each were to retain the same revenue level per pupil. This change in local effort under power equalization thus required Banff to raise all of its revenues through local property taxes and receive no provincial aid, whereas Fort McMurray was required to raise most of its revenue locally while receiving a small amount of provincial aid.

In addition, the same local tax effort by two or more school jurisdictions under the existing plan did not necessarily mean that with the addition or omission of provincial aid that each would have equal amounts of funds per pupil. Taking this difference in available funds (provincial plus local) to reflect a stable situation, the replacement of the

TABLE 7.5

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICTION REVENUES FOR THE YEAR 1980

			Mill Rate		Provincial Aid / Pupil					
					A1[5]			A2[6]		
Number[1]	Jurisdiction	R.P.[2]	Existing[3]	Power[4]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC94	Whitecourt	1898	16.07	20.19	1600	1550	-50	1705	1655	-50
RC84	Valleyview	2053	17.50	21.85	1791	1750	-41	1891	1851	-40
Cty16	Wheatland	2285	19.00	24.31	1288	1117	-171	1674	1503	-171
Dist102	Banff	3578	19.06	38.07	574	0	-574	1674	0	-1674
Cty9	Beaver	2358	28.00	25.09	1715	1767	+52	1867	1918	+51
Div28	Willow Creek	2355	28.50	25.06	1669	1737	+68	1797	1865	+68
RC56	High Prairie	1954	28.55	20.79	1473	1528	+55	1521	1576	+51
Div41	Rocky View	2331	27.42	24.80	1367	1436	+69	1607	1676	+69
Dist2833	Fort McMurray	3053	35.33	32.48	1290	1393	+103	1785	1888	+103
RC32	Fort McMurray	3049	35.33	32.44	1293	1397	+104	1782	1886	+104
Cty3	Ponoka	2502	40.18	26.62	1655	1891	+236	1804	2040	+236
RC26	Fort Vermilion	2325	66.54	24.74	2069	2195	+126	2124	2250	+126

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] R.P. = Revenue Per Pupil
[3] Provincial Average = 25.83 mills
[4] Provincial Average = 24.65 mills
[5] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[6] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

existing plan by power equalization did have the effect of lessening the required local tax effort of the jurisdiction with the least funds. For example, both Fort McMurray public and separate school districts levied a tax rate of 35.33 mills on ratepayers and were required to operate on slightly different amounts of total revenue under the existing finance plan. The power equalizing plan, in contrast, adjusted for this difference in revenue by requiring the two tax rates to differ by .05 mills.

Local Mill Rate Fixed

A second analysis on the data was performed under the assumption that the local tax effort of each school jurisdiction under the existing plan did not change when this plan was replaced by a power equalizing plan. The overall results of this analysis are given in Table 7.6 with a jurisdiction by jurisdiction breakdown presented in Table D.2 of Appendix D. As indicated by Table 7.6, more jurisdictions had less revenue per pupil under power equalization than they were able to secure under the existing plan while levying the same local mill rate. No one type of school jurisdiction in 1975 appeared to gain or loss in great excess in comparison to the remaining jurisdictions. In the years 1978 and 1980, however, public school districts benefited the greatest with more than half receiving a higher level of revenue per pupil. Grande Cache School District No. 5258, in comparison, neither gained nor lost revenue when the existing plan was replaced by power equalization. Under both plans, the Grande Cache school system secured $1908 per pupil (Table D.2, Appendix D). School divisions and counties suffered the greatest in number with 23 percent of the school divisions and 20 percent of the counties required to operate with less funds given their local tax effort. In 1980, school divisions as well as public school districts gained by the substitution of finance plans. Here, 55 percent of the school divisions and 71 percent of the public school districts had more funds per pupil under power equalization. In contrast, 77 percent of the counties were required to operate with less funds per pupil under power equalization than they had under the existing plan.

Tables 7.7 through 7.9 demonstrate this difference in allocated provincial aid for the years 1975, 1978 and 1980. The jurisdictions selected are representative of jurisdictions whose locally levied mill rates were lower, higher or approximately

TABLE 7.6

NUMBER OF SCHOOL JURISDICTIONS HAVING MORE OR LESS REVENUE PER PUPIL WHEN THE EXISTING PLAN IS REPLACED BY POWER EQUALIZATION[1]

	Revenue Per Pupil												
	1975				1978					1980			
Types of Jurisdictions	Up		Down		Up		Down		No Change	Up		Down	
	#	(Change)[2]	#	(Change)	#	(Change)	#	(Change)	#	#	(Change)	#	(Change)
Divisions	12	(+183)	18	(−294)	7	(+120)	23	(−253)	–	16	(+223)	13	(−228)
Counties	14	(+109)	16	(−167)	6	(+217)	24	(−212)	–	7	(+261)	23	(−224)
Public School Districts	12	(+309)	15	(−170)	18	(+255)	8	(−178)	1	17	(+258)	7	(−232)
R.C.S.S.D.	18	(+150)	24	(−230)	12	(+233)	30	(−284)	–	13	(+344)	28	(−305)
Others[3]	2	(+254)	4	(−300)	1	(+92)	3	(−663)	–	1	(+69)	5	(−368)
Total	58	(+184)	77	(−234)	44	(+219)	88	(−260)	1	54	(+265)	76	(−265)

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[1] Data represents a summary of changes given in Table D.2 of Appendix D where the local mill rate was held constant.
[2] Average change in the amount of revenue each type of jurisdiction had per pupil under power equalization.
[3] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

equivalent to the provincial average.

1975. The effects of power equalization for selected school jurisdictions in 1975 are illustrated in Table 7.7. As indicated by this table, a jurisdiction's local tax effort was not related to the amount of provincial support received under the existing plan. For example, Edmonton Public School District No. 7 with a local tax effort of 19.57 mills received less monetary support from the province than McLennan R.C.S.S.D. No. 30 with an effort of 7.79 mills. On the other hand, Medicine Hat School Division No. 4 with a local tax effort greater than both Edmonton and McLennan received more provincial aid than either of the latter two districts. By replacing the existing plan with a power equalizing plan, a direct association between local tax effort and allocated provincial aid was found to exist. Edmonton was allocated $566 more per pupil than McLennan and $436 less per pupil than Medicine Hat under power equalization whereas under the existing plan Edmonton received $122 less per pupil than the McLennan separate school system and $165 less per pupil than Medicine Hat School Division. This illustration was highlighted under the assumption that the mandatory foundation levy is a local tax. If the alternative assumption was operationalized (i.e., mandatory foundation levy is a provincial tax) a parallel situation occurred; that is, the greater the levied local tax rate the greater the level of allocated provincial funds. As can be seen from the above illustration and the table in general, the lower the local tax effort the lower the level of support the jurisdiction received from the province under power equalization.

As indicated earlier, the use of a power equalizing plan meant that equal provincial appropriations per pupil would be allocated to jurisdictions exerting equal local tax effort. The situation between Theresetta R.C.S.S.D. No. 23 and Rocky View School Division No. 41 perhaps best exemplifies this condition. Both school jurisdictions levied a tax rate of 19.69 mills on their ratepayers. Despite their equal tax effort, Rocky View School Division was able to secure $164 more per pupil than Theresetta Separate School District ($62 assuming that the mandatory foundation levy was a local tax) under the existing finance plan. In comparison, the allocation of funds under a power equalizing plan resulted in both Rocky View and Theresetta receiving equal provincial appropriations per pupil. Both would have received per pupil allocations of $945 assuming that the mandatory foundation levy is a local tax or $1062 assuming that the mandatory

TABLE 7.7

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE FOR THE YEAR 1975

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	Mill Rate[2]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC84	Valleyview	6.60	1363	317	-1046	1411	356	-1055
RC30	McLennan	7.79	997	374	-623	1029	420	-609
Dist102	Banff	8.51	497	409	-86	994	459	-535
RC97	Vermilion	8.81	1018	423	-595	1045	475	-570
Dist7	Edmonton	19.57	875	940	+65	1013	1055	+42
RC23	Theresetta	19.69	921	945	+24	942	1062	+120
Div41	Rocky View	19.69	983	945	-38	1106	1062	-44
RC54	Taber	19.84	939	953	+14	997	1070	+73
Dist4910	Grovedale	26.56	1076	1275	+199	1126	1432	+306
Div4	Medicine Hat	28.66	1040	1376	+336	1393	1545	+152
Cty4	Newell	29.15	954	1400	+446	1126	1572	+446
Div12	Yellowhead	32.21	1014	1547	+533	1113	1737	+624

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District

[2] Provincial Average = 19.76 mills

[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

foundation levy is a provincial tax.

1978. The effects of power equalization for selected school jurisdictions in 1978 are illustrated in Table 7.8. As observed in 1975, jurisdictions taxing themselves at a relatively low level tended to secure a moderate to high level of provincial support under the existing plan. The replacement of the existing finance plan with a power equalizing plan appeared to require these jurisdictions to accept a greater proportion of the financial burden themselves. For example, Valleyview R.C.S.S.D. No. 84 with a local tax effort of 14.50 mills received $1469 per pupil under the existing provincial allocation plan, assuming that the mandatory foundation levy is a local tax, whereas under a power equalizing plan the provincial allotment was restricted to $634 per pupil. Under the assumption that the foundation levy is a provincial tax, the provincial appropriation was $1560 under the existing plan and $723 under power equalization. Nevertheless, some jurisdictions did benefit under a power equalizing plan. The County of Newell No. 4 and Fort Vermilion R.C.S.S.D. No. 26, for example, received increases in provincial support to the extent of 35 percent and 100 percent, respectively, in 1978 under this plan. Specifically, Newell received $470 more per pupil assuming that the mandatory foundation levy is a local tax or $516 more per pupil assuming that the mandatory foundation levy is a provincial tax. Fort Vermilion separate school system, in comparison, received $1198 more per pupil assuming that the mandatory foundation levy is a local tax or $1499 more per pupil assuming that the levy is a provincial tax.

1980. The effects of power equalization for selected school jurisdictions in 1980 are illustrated in Table 7.9. As evident in this table, a jurisdiction's local tax effort was not closely related to the amount of provincial aid received under the existing plan. For example, under the assumption that the mandatory foundation levy is a local tax, Willow Creek School Division No. 28 with a local tax effort of 28.50 mills received $196 more per pupil than High Prairie R.C.S.S.D. No. 56 which taxed its ratepayers at a rate of 28.55 mills. On the other hand, the County of Ponoka No. 3 which levied a tax rate of 40.18 mills on its ratepayers received $182 more per pupil than High Prairie. The assumption that the mandatory foundation levy is a provincial tax widen this difference in provincial funding by approximately another $100 per pupil. In comparison, the adoption of power equalization ensured that as the local tax effort increased so did the amount of provincial

TABLE 7.8

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE FOR THE YEAR 1978

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	Mill Rate[2]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC84	Valleyview	14.50	1469	634	-835	1560	723	-837
RC94	Whitecourt	14.68	1234	642	-592	1300	732	-568
Div62	Drumheller	16.69	1356	730	-626	1440	832	-608
RC30	McLennan	16.70	1862	731	-1131	1900	832	-1068
Cty29	Flagstaff	28.19	1406	1233	-173	1536	1405	-131
Div30	Starland	28.47	1481	1246	-235	1602	1419	-183
Dist7	Edmonton	27.69	1061	1212	+151	1299	1380	+81
Cty6	Stettler	29.62	1697	1296	-401	1945	1476	-469
Div24	Sturgeon	35.85	1415	1569	+154	1591	1786	+195
Cty4	Newell	41.02	1325	1795	+470	1528	2044	+516
Div52	Fort Vermilion	43.97	1927	1924	-3	2027	2191	+164
RC26	Fort Vermilion	57.05	1298	2496	+1198	1344	2843	+1499

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[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] Provincial Average = 28.11 mills
[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 7.9

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE FOR THE YEAR 1980

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	Mill Rate[2]	Existing (1)	Power (2)	Change (2)–(1)	Existing (3)	Power (4)	Change (4)–(3)
RC94	Whitecourt	16.07	1600	863	-737	1705	1010	-695
RC84	Valleyview	17.50	1791	939	-852	1891	1100	-791
Cty16	Wheatland	19.00	1288	1020	-268	1674	1194	-480
Dist102	Banff	19.06	574	1023	+449	1674	1198	-476
Cty9	Beaver	28.00	1715	1503	-212	1867	1760	-107
Div28	Willow Creek	28.50	1669	1530	-139	1797	1792	-5
RC56	High Prairie	28.55	1473	1533	+60	1521	1795	+274
Div41	Rocky View	27.42	1367	1472	+105	1607	1724	+117
Dist2833	Fort McMurray	35.33	1290	1897	+607	1785	2221	+436
RC32	Fort McMurray	35.33	1293	1897	+604	1782	2221	+439
Cty3	Ponoka	40.18	1655	2157	+502	1804	2526	+722
RC26	Fort Vermilion	66.54	2069	3572	+1503	2124	4183	+2059

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[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District

[2] Provincial Average = 25.83 mills

[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

assistance and vice versa.

Additionally, where there existed a slight discrepancy in the amount of funding received by two jurisdictions taxing themselves at the same level under the existing finance plan, no distinction was evident under a power equalizing plan. Fort McMurray public and separate school districts illustrated this situation. Fort McMurray public school district received three dollars more per pupil than its counterpart Fort McMurray separate school district; though both taxed their ratepayers at a level of 35.33 mills. Had a power equalizing plan been implemented, both school systems would have received equal per pupil amount of provincial assistance.

Equalization Impact

Table 7.10 gives the comparative equalization effects of the existing and power equalizing plans by way of two measures, namely, the coefficient of variation and the Gini coefficient. The equalization effects as revealed by each of these measures are discussed below.

Coefficient of variation. The level of variation, as revealed in Table 7.10, in most instances increased when the existing plan was replaced by power equalization. This increase in variation ranged from a low of one percent in 1977 under the condition of fixed jurisdiction revenue to a high of 14 percent in 1980 under the condition of fixed local mill rate.

Assuming that the mandatory foundation levy is a provincial tax, replacing the existing plan with power equalization under the condition of fixed jurisdiction revenues per pupil lowered the coefficient of variation by one percent in 1975, no change in 1976, and increased the level of variation by seven percent in 1980. Under conditions of fixed local mill rates this increase in variation was more extensive. Overall, however, the coefficient under the existing plan ranged from .17 in 1975 to .13 in 1980 whereas under power equalization the coefficient ranged from .28 to .27, a rise of nine percent in 1975 to 14 percent in 1980.

Assuming that the mandatory foundation levy is a local tax, the replacement of the existing plan by power equalization had the same general effect as noted above. That is, with the exception of the years 1975 and 1976 under conditions of fixed jurisdiction

TABLE 7.10

EQUALIZATION IMPACT OF A POWER EQUALIZING PLAN IN COMPARISON TO THE EXISTING PLAN

Finance Plans	1975	1976	1977	1978	1979	1980
			COEFFICIENT OF VARIATION			
Existing Plan						
Levy[1] a Provincial Tax	.17	.16	.14	.16	.16	.13
Levy a Local Tax	.21	.20	.17	.21	.21	.19
Power Equalizing Plan						
Revenue Per Pupil Fixed						
Levy a Provincial Tax	.16	.16	.15	.22	.21	.20
Levy a Local Tax	.21	.19	.18	.25	.26	.24
Local Mill Rate Fixed						
Levy a Provincial Tax	.28	.25	.23	.24	.24	.27
Levy a Local Tax	.28	.25	.23	.24	.24	.27
			GINI COEFFICIENT			
Existing Plan						
Levy a Provincial Tax	-.027	-.024	-.023	-.034	-.036	-.040
Levy a Local Tax	-.049	-.047	-.049	-.065	-.072	-.077
Power Equalizing Plan						
Revenue Per Pupil Fixed						
Levy a Provincial Tax	-.033	-.026	-.031	-.047	-.059	-.069
Levy a Local Tax	-.057	-.050	-.058	-.078	-.097	-.109
Local Mill Rate Fixed						
Levy a Provincial Tax	-.014[2]	-.014[2]	-.002[2]	-.022[2]	-.048	-.059
Levy a Local Tax	-.014[2]	-.014[2]	-.002[2]	-.022[2]	-.048	-.059

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[1] Levy = Mandatory Foundation Levy

[2] Lorenz curve crosses the diagonal line.

revenue the level of variation increased by as much as eight percent.

Gini coefficient. Negative but low values were recorded for the Gini coefficients under both the existing plan and the power equalizing plan indicating that the poorer jurisdictions received a greater percentage of all provincial appropriations as compared to the more wealthy jurisdictions. The magnitude of the coefficients was greatest when the mandatory foundation levy was taken to be a local tax and under the condition of fixed jurisdiction revenue per pupil. At that time, the absolute value of the coefficient ranged from a low of .050 in 1976 to a high of .109 in 1980. Under conditions of fixed local mill rate the coefficient remained constant whether the mandatory foundation levy was treated as a provincial tax or as a local tax, the first four year remaining ambiguous in their meaning with the Lorenz curve crossing the diagonal line. Furthermore, under the condition of fixed local mill rate and the assumption that the levy is a local tax, the Gini coefficient was lower under power equalization.

Discussion

Given the local tax effort of each local school jurisdiction, the application of a power equalizing plan produced two general effects on provincial allocation patterns: (1) the revised per pupil allocations to school jurisdictions with low local mill rates were lower than those for jurisdictions levying a high mill rate and (2) the same local tax effort meant the school jurisdictions had the same amount of funds (local plus provincial) available per pupil. This latter effect was prevalent regardless of a sometimes great discrepancy in the wealth base, namely, equalized assessment per eligible pupil, of the school jurisdictions in question. Finally, the degree of equalization as reflected by the coefficient of variation and the Gini coefficient increased for the most part under power equalization. In other words, allocated provincial funds under power equalization showed more evidence of accounting for disparities in jurisdictional wealth than was found to be true under the existing plan. An exception to this finding occurred when the existing plan was replaced with power equalization under the condition of fixed local mill rates. Under the condition of fixed local mill rates, the absolute value of the Gini coefficients in 1979 and 1980 (assuming that the mandatory foundation levy is a local tax) decreased from .072 to .048 in 1979 and from .077 to .059 in 1980.

PERCENTAGE EQUALIZING

What is the degree of fiscal equalization obtained under a percentage equalizing plan?

This section first presents a description of the allocated provincial level of support to local school jurisdictions by way of a percentage equalizing plan. Secondly, the fiscal equalizing effect of the percentage equalizing plan as compared to the fiscal equalizing effect of the existing provincial finance plan is examined.

Characteristics of the Percentage Equalizing Plan

The allocation of funds to local school jurisdictions under a percentage equalizing plan took on certain characteristics which are demonstrated in Table 7.11. As indicated by the first column of the table, the most affluent school jurisdiction had an equalized assessment per pupil 30 times as great as the least affluent jurisdiction in 1975. This discrepancy in wealth increased to a ratio of 48 to 1 the following year. For the subsequent two years the equalized assessment per pupil declined to a ratio of 36 to 1 after which time the ratio increased to 46 to 1 for 1979 and 1980. Under percentage equalization, the funds required to be raised at the local level (third column of table) was directly related to the jurisdiction's equalized assessment per pupil. For example, in 1980 the wealthiest school jurisdiction with an equalized assessment per pupil 46 times as great as the least affluent jurisdiction was required to raise 46 times the amount of revenue at the local level than the least affluent jurisdiction. Provincial appropriations, on the other hand, were not as directly related to jurisdiction wealth though the least affluent jurisdiction received twice the amount of provincial funds as the most affluent jurisdiction in the years 1975, 1978, and 1979. During the remaining years this ratio increased to as high as six to one in 1976.

Effects of Implementing Percentage Equalization

The preceding subsection described some general characteristics of a percentage equalizing plan. This subsection presents a comparative perspective of the fiscal equalizing tendencies of a percentage equalizing and the existing provincial finance plans.

TABLE 7.11

RATIOS OF FISCAL APPROPRIATIONS IN RELATION TO JURISDICTIONAL WEALTH UNDER PERCENTAGE EQUALIZATION

Year	Equalized Assessment Per Pupil (L:H)[1]	Provincial Appropriations Per Pupil (L:H)	Local Appropriations Per Pupil (L:H)
1975	1:30	2:1	1:30
1976	1:48	6:1	1:48
1977	1:36	3:1	1:36
1978	1:36	2:1	1:36
1979	1:46	2:1	1:46
1980	1:46	4:1	1:46

[1] Least Affluent Jurisdiction In Comparison to the Most Affluent Jurisdiction

The overall effects of replacing the existing plan with percentage equalization are given in Table 7.12 for the years 1975, 1978, and 1980. As indicated by this table, in 1975 less than half the number of school jurisdictions that would have received more provincial assistance under percentage equalization received a lower level of provincial aid. School divisions and counties were in the latter group while public and separate school districts were mostly in the former group. Furthermore, those school divisions receiving less provincial assistance suffered an average loss of $276 per pupil while school divisions which benefited under percentage equalization did so to an average of $71 per pupil. The reverse situation was demonstrative among separate school districts. The separate school districts receiving more provincial funds under percentage equalization averaged an increase of $220 per pupil while those districts receiving a decrease in funds did so to the extend of $129 per pupil. In 1978, this separation in the number of jurisdictions that would have received either more or less funds under percentage equalization remained; that is, about twice the number of jurisdictions would have received more provincial assistance as compared to the number of jurisdictions that would have received less when the existing plan is replaced with percentage equalization. This pattern of the number of school jurisdictions that would either receive an increase in provincial funds or a decrease in provincial funds continued in 1980. The jurisdictions benefiting greatest in numbers were separate school systems where 36 of the 41 school systems or 88 percent would have received more provincial support under a percentage equalizing finance plan as opposed to the existing finance plan.

Tables 7.13 through 7.15 demonstrate the change in provincial aid per pupil when the existing plan is replaced by a percentage equalizing plan for selected school jurisdictions. The jurisdictions selected are representative of jurisdictions whose equalized assessment per eligible pupil were lower, higher or approximately equivalent to the provincial average.

1975. The effects of percentage equalization for selected school jurisdictions in 1975 are illustrated in Table 7.13. A jurisdiction's wealth, as reflected by the equalized assessment per eligible pupil, appeared to be related to the level of provincial funding only under the proposed percentage plan. For example, under the existing provincial plan Beaverlodge R.C.S.S.D. No. 68 with an equalized assessment per pupil of $2002 received

TABLE 7.12

NUMBER OF SCHOOL JURISDICTIONS HAVING MORE OR LESS REVENUE PER PUPIL WHEN THE EXISTING PLAN IS REPLACED BY PERCENTAGE EQUALIZATION[1]

Types of Jurisdictions	Revenue Per Pupil					
	1975		1978		1980	
	Up	Down	Up	Down	Up	Down
	# (Change)[2]	# (Change)	# (Change)	# (Change)	# (Change)	# (Change)
Divisions	14 (+71)	16 (−276)	10 (+125)	20 (−371)	13 (+142)	16 (−444)
Counties	14 (+68)	16 (−96)	17 (+73)	13 (−164)	17 (+88)	13 (−181)
Public School Districts	23 (+148)	4 (−231)	19 (+180)	8 (−558)	17 (+226)	7 (−1007)
R.C.S.S.D.	40 (+220)	2 (−129)	36 (+273)	6 (−124)	36 (+313)	5 (−263)
Others[3]	4 (+167)	2 (−424)	3 (+206)	1 (−279)	5 (+163)	1 (−461)
Total	95 (+197)	40 (−200)	85 (+192)	48 (−313)	88 (+219)	42 (−435)

[1] Data represents a summary of changes given in Table E.1 of Appendix E.
[2] Average change in the amount of revenue each type of jurisdiction had per pupil under percentage equalization.
[3] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts

TABLE 7.13

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A PERCENTAGE EQUALIZING PLAN FOR THE YEAR 1975

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	E.A.P.[2]	Existing (1)	% (2)	Change (2)–(1)	Existing (3)	% (4)	Change (4)–(3)
Div 61	Northland	1524	2351	1283	-1068	2381	1296	-1085
RC26	Fort Vermilion	1639	842	1280	+438	878	1294	+416
RC68	Beaverlodge	2002	1027	1269	+242	1036	1287	+251
Dist4910	Grovedale	2118	1076	1266	+190	1126	1284	+158
Div9	Rangeland	12588	1162	970	-192	1240	1079	-161
Div60	Three Hills	13201	972	952	-20	1095	1067	-28
Cty8	Forty Mile	13628	1115	940	-175	1217	1058	-159
Div29	Pincher Creek	13641	874	940	+66	1072	1058	-14
Div1	Berry Creek	33206	1554	386	-1168	1891	674	-1217
Dist102	Banff	34408	497	352	-145	994	650	-344
Dist4152	Seebe	35652	980	317	-663	1688	626	-1062
Dist4233	Waterton Park	45329	-200	43	+243	986	436	-550

[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District
[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 13,303)
[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

less provicial assistance per pupil than Rangeland School Division No. 9 whose equalized assessment per pupil was $12,588. At the same time, Banff School District No. 102 with an equalized assessment of $34,408 per pupil received less provincial assistance than either Beaverlodge or Rangeland. This type of situation disappeared under a percentage equalizing plan. By utilizing a percentage equalizing plan, Beaverlodge R.C.S.S.D. No. 68 was the recipient of 1.1 times the amount allocated to Rangeland School Division No. 9 and 3.6 times (levy a local tax) or 2.0 times (levy a provincial tax) the amount allocated to Banff School District No. 102. This pattern of allocating a greater portion of provincial funds to the poorer jurisdictions was maintained throughout the province under percentage equalization (Appendix E).

1978. The effects of percentage equalization for selected school jurisdictions in 1978 are illustrated in Table 7.14. More so than in 1975 (Table 7.13), wealthy jurisdictions tended to receive fewer provincial funds than the less affluent jurisdictions. Yet, within each group of jurisdictions inconsistency in funding practices was exemplified. For instance, within the group of jurisdictions with equalized assessments below the provincial average the following inconsistencies in provincial funding practices were observed. Fort Vermilion R.C.S.S.D. No. 26 with an equalized assessment of $2075 per pupil received $227 less per pupil, assuming that the mandatory foundation levy is a local tax, or $213 less per pupil assuming that the mandatory foundation levy is a provincial tax, than Theresetta R.C.S.S.D. No. 23 with an equalized assessment of $3442 per pupil. A similar inconsistency is also prevalent among jurisdictions with equalized assessments equivalent to the provincial average and where the mandatory foundation levy is treated as a provincial tax. For example, Lethbridge R.C.S.S.D. No. 9 with an equalized assessment of $16,711 received $221 less per pupil than Pincher Creek School Division No. 29 with an equalized assessment of $17,616 per pupil or 1.1 times as great. In the last group of jurisdictions, equalized assessments per pupil greater than the provincial average, the inconsistency in provincial allocations in relation to jurisdiction wealth continued. Under percentage equalization, however, the above inconsistencies in provincial allocations to school jurisdictions disappeared. This is to say, as the wealth of a jurisdiction increased the level of assistance the jurisdiction received from the province decreased proportionally.

TABLE 7.14

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A PERCENTAGE EQUALIZING PLAN FOR THE YEAR 1978

			Provincial Aid / Pupil					
				A1[3]			A2[4]	
Number[1]	Jurisdiction	E.A.P.[2]	Existing (1)	% (2)	Change (2)–(1)	Existing (3)	% (4)	Change (4)–(3)
RC 68	Beaverlodge	2057	1267	1794	+527	1285	1814	+529
RC26	Fort Vermilion	2075	1298	1793	+495	1344	1814	+470
Dist4910	Grovedale	2923	1753	1761	+8	1821	1790	-31
RC23	Theresetta	3442	1525	1741	+216	1557	1776	+219
RC9	Lethbridge	16711	1233	1240	+7	1282	1408	+126
RC104	Fort Saskatchewan	17038	1229	1228	-1	1414	1399	-15
Div54	East Smoky	17297	1227	1218	-9	1552	1392	-160
Div29	Pincher Creek	17616	1223	1206	-17	1503	1383	-120
Dist102	Banff	59938	445	-392	-837	1349	209	-1140
Dist4233	Waterton Park	62695	422	-496	-918	1276	132	-1144
Dist1699	Exshaw	65997	343	-620	-963	1558	41	-1517
Dist4152	Seebe	73180	452	-892	-1344	1800	-159	-1959

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[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District
[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 17,001)
[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

1980. The effects of percentage equalization for selected school jurisdictions in 1980 are illustrated in Table 7.15. As was evident in earlier years (Tables 7.13 and 7.14), the funding mechanism implemented by the province appeared to relate moderately to the wealth of school jurisdictions. This association between the two variables provincial allocations and wealth is illustrated as follows: the poorest jurisdiction, Fort Vermilion R.C.S.S.D. No. 26, received 8.4 times (mandatory foundation levy a local tax) or 1.1 times (mandatory foundation levy a provincial tax) the amount of provincial aid that Exshaw School District No. 1699, the second most affluent school jurisdiction, received. At the same time, Berry Creek School Division No. 1 with an equalized assessment per pupil 23 times that of the poorest jurisdiction, Fort Vermilion R.C.S.S.D. No. 26, received $130 more per pupil than the Fort Vermilion school jurisdiction assuming that the mandatory foundation levy is a local tax or $824 more per pupil assuming that the levy is a provincial tax. These inconsistencies in the provincial funding practices were eliminated under a percentage equalizing plan. The amount of provincial funds allocated to a jurisdiction under a percentage plan was inversely related to the tax base, equalized assessment per eligible pupil, of the jurisdiction.

Equalization Impact

Table 7.16 gives the comparative equalization effects of the existing and percentage equalizing plans by way of two measures, namely, the coefficient of variation and the Gini coefficient. The equalization effects as revealed by each of these measures are discussed below.

Coefficient of variation. Coefficients of variation in provincial appropriations per eligible pupil, as revealed in Table 7.16, decreased in 1975 and increased from 1976 to 1980 when the existing plan was replaced by percentage equalization. In 1975, the coefficient dropped five percent (.17 to .12) assuming that the mandatory foundation levy is a provincial tax whereas the decline in variation was only three percent (.21 to .18) assuming that the levy is a local tax. After 1975, the level of variation increased by four percent in 1976, two percent in 1977 to a final increase of 12 percent in 1980 assuming that the levy is a provincial tax. Treating the levy as a local tax increased the level of variation at least another five percent under percentage equalization so that in

TABLE 7.15

EFFECTS OF REPLACING THE EXISTING FINANCE PLAN WITH A PERCENTAGE EQUALIZING PLAN FOR THE YEAR 1980

			Provincial Aid / Pupil					
				A1[3]			A2[4]	
Number[1]	Jurisdiction	E.A.P.[2]	Existing (1)	% (2)	Change (2)–(1)	Existing (3)	% (4)	Change (4)–(3)
RC26	Fort Vermilion	3015	2069	2216	+147	2124	2242	+118
RC56	High Prairie	5083	1473	2147	+674	1521	2190	+669
Dist4910	Grovedale	5178	2063	2144	+81	2161	2188	+27
RC68	Beaverlodge	5767	1454	2124	+670	1503	2173	+670
RC128	Spruce Grove	26710	1396	1424	+28	1792	1653	-139
Cty6	Stettler	27991	1385	1381	-4	2129	1621	-508
Div60	Three Hills	28894	1378	1351	-27	1821	1598	-223
Div30	Starland	29349	1374	1336	-38	2115	1587	-528
Div1	Berry Creek	68865	2199	15	-2184	2948	605	-2343
Dist102	Banff	99906	573	-1022	-1595	1674	-167	-1841
Dist1699	Exshaw	116471	248	-1576	-1824	1978	-578	-2556
Dist4233	Waterton Park	139407	636	-2342	-2978	2016	-1148	-3164

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[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District
[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 27,878)
[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 7.16

EQUALIZATION IMPACT OF A PERCENTAGE EQUALIZING PLAN IN COMPARISON TO THE EXISTING PLAN

Finance Plans	1975	1976	1977	1978	1979	1980
			COEFFICIENT OF VARIATION			
Existing Plan						
Levy[1] a Provincial Tax	.17	.16	.14	.16	.16	.13
Levy a Local Tax	.21	.20	.17	.21	.21	.19
Percentage Equalizing Plan						
Levy a Provincial Tax	.12	.20	.16	.21	.20	.25
Levy a Local Tax	.18	.30	.24	.31	.31	.38
			GINI COEFFICIENT			
Existing Plan						
Levy a Provincial Tax	-.027	-.024	-.023	-.034	-.036	-.040
Levy a Local Tax	-.049	-.047	-.049	-.065	-.072	-.077
Percentage Equalizing Plan						
Levy a Provincial Tax	-.051	-.048	-.060	-.067	-.079	-.083
Levy a Local Tax	-.083	-.074	-.093	-.103	-.125	-.131

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[1] Levy = Mandatory Foundation Levy

1976 a rise of 10 percent occurred, seven percent in 1977 and in 1980 an increase of 19 percent.

Thus, the level of variation was greatest when the mandatory foundation levy was treated as a local tax (by at least four percent) and this variation was greatest under percentage equalization.

Gini coefficient. In terms of the extent fiscal equalization was achieved in relation to jurisdiction wealth, the less affluent jurisdictions (under either the existing plan or the percentage equalizing plan) continued to receive more funds than the more affluent jurisdictions. This tendency for the poorer jurisdictions to be supported to a greater degree was reflected by the negative value of the Gini coefficients. Under a percentage plan this trend strengthen; especially assuming that the mandatory foundation levy is a local tax. Under this assumption, the absolute value of the Gini coefficient increased from .049 to .083 in 1975, a rise of .034. By 1980, the absolute value of the coefficient had increased by .054 (.077 to .131) points.

Discussion

In sum, some definite shifts in equalization in both a positive and negative direction were found to occur when the existing plan was replaced by a percentage equalizing plan. The extent of the changes was also very diverse ranging from almost no change to at least a 20 percent movement towards greater equalization. The greatest increase in equalization was seen to occur when percentage equalization was implemented assuming that the foundation levy is a local tax. Thus, the trend under the existing plan of allocating more provincial funds to the poorer jurisdictions was highlighted that much more under percentage equalization.

SUMMARY

This chapter has presented and discussed the findings related to the effect that two alternative finance plans would have had on the present state of fiscal equalization among local school jurisdictions. The two alternative finance plans examined were the power equalizing finance plan and the percentage equalizing finance plan.

Generally, the implementation of either alternative plan resulted in a greater degree of equalization being obtained. As reflected in Table 7.17, the level of variation was greatest under percentage equalization, followed by power equalization with local mill rates fixed, then power equalization with revenue per pupil fixed, and finally under the existing plan, assuming that the mandatory foundation levy is a local tax. Percentage equalization and power equalization under the conditon of fixed local mill rates changed position under the assumption that the mandatory foundation levy is a provincial tax. The ordering of the finance plans when the equalization measure was the Gini coefficient was similar, as is reflected in Table 7.18. The greatest degree of equalization was obtained under percentage equalization, followed by power equalization with revenue per pupil fixed, then power equalization with local mill rates fixed, and finally the existing plan assuming that the mandatory foundation levy is a provincial tax. Assuming that the levy is a local tax had the effect of reversing the rank position of power equalization under the condition of fixed local mill rates and the existing plan.

TABLE 7.17

EQUALIZATION IMPACT OF THREE FINANCE PLANS AS GIVEN BY THE COEFFICIENT OF VARIATION

Finance Plans	1975	1976	1977	1978	1979	1980
Existing Plan						
Levy[1] a Provincial Tax	.17	.16	.14	.16	.16	.13
Levy a Local Tax	.21	.20	.17	.21	.21	.19
Power Equalizing Plan						
Revenue Per Pupil Fixed						
Levy a Provincial Tax	.16	.16	.15	.22	.21	.20
Levy a Local Tax	.21	.19	.18	.25	.26	.24
Local Mill Rate Fixed						
Levy a Provincial Tax	.28	.25	.23	.24	.24	.27
Levy a Local Tax	.28	.25	.23	.24	.24	.27
Percentage Equalizing Plan						
Levy a Provincial Tax	.12	.20	.16	.21	.20	.25
Levy a Local Tax	.18	.30	.24	.31	.31	.38

[1] Levy = Mandatory Foundation Levy

TABLE 7.18

EQUALIZATION IMPACT OF THREE FINANCE PLANS AS GIVEN BY THE GINI COEFFICIENT

Finance Plans	1975	1976	1977	1978	1979	1980
Existing Plan						
Levy[1] a Provincial Tax	-.027	-.024	-.023	-.034	-.036	-.040
Levy a Local Tax	-.049	-.047	-.049	-.065	-.072	-.077
Power Equalizing Plan						
Revenue Per Pupil Fixed						
Levy a Provincial Tax	-.033	-.026	-.031	-.047	-.059	-.069
Levy a Local Tax	-.057	-.050	-.058	-.078	-.097	-.109
Local Mill Rate Fixed						
Levy a Provincial Tax	-.014[2]	-.014[2]	-.002[2]	-.022[2]	-.048	-.059
Levy a Local Tax	-.014[2]	-.014[2]	-.002[2]	-.022[2]	-.048	-.059
Percentage Equalizing Plan						
Levy a Provincial Tax	-.051	-.048	-.060	-.067	-.079	-.083
Levy a Local Tax	-.083	-.074	-.093	-.103	-.125	-.131

[1] Levy = Mandatory Foundation Levy

[2] Lorenz curve crosses the diagonal line.

CHAPTER 8

REVENUE ADJUSTED BY A PRICE INDEX

The previous three chapters presented findings related to the extent to which fiscal equalization was attained under three educational finance plans. The purpose of this chapter is to reexamine these findings when the allocated funds under each plan is first adjusted by an appropriate price index so that real as compared to inflated dollars is the basis of comparison. Specifically, the investigation undertaken was conducted in response to the problem:

> *What is the degree of fiscal equalization obtained when the amount of the grant is adjusted by a price index under*
>
> *a) the existing allocation plan?*
>
> *b) a power equalizing plan?*
>
> *c) a percentage equalizing plan?*

PRICE INDEX

Two different price indices were developed for the purpose of responding to the above problem. The first index was labelled a *provincial price index* and was constructed under the assumption that patterns of expenditures were the same among all local school jurisdictions. The second index developed assumed that the aforementioned consistency in expenditure patterns existed only within the different types of jurisdictions. In other words, the expenditure patterns of, say, school divisions were assumed to differ from that of counties or school districts. Correspondingly, these indexes were labelled *jurisdictional price indexes.*

The details pertaining to the development of the provincial price index as well as the jurisdictional price indexes are given in Appendix F. A summary of these indices, however, is presented in Table 8.1. As revealed in this table, adjusting figures by a

TABLE 8.1

PROVINCIAL AND JURISDICTIONAL PRICE INDEXES FOR THE YEARS 1975 to 1980[1]

	Prov Index	Jurisdictional Indexes				
Year	All Jurisdictions	Divisions	Counties	Public School Districts	R.C.S.S.D.	Others[2]
1975[3]	100.00	100.00	100.00	100.00	100.00	100.00
1976	114.07	115.22	111.76	113.16	115.85	142.85
1977	130.55	130.50	126.37	131.18	131.45	161.52
1978	143.65	145.16	142.43	142.25	143.82	184.87
1979	160.33	161.40	159.08	160.08	158.34	194.37
1980	178.37	183.35	178.77	173.06	183.01	229.69

[1] Summary of Tables F.1 to F.7 in Appendix F.
[2] Includes Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public School Districts.
[3] Base year.

provincial index indicated that expenditures had increased by 78.37 percent from 1975 to 1980. Assuming that jurisdictions within a given type were similar in their expenditure patterns but that such patterns differed between types resulted in slightly different rates of change from the provincial adjustment. In this case, expenditures were seen to increase by 83.35 percent within school divisions, 78.77 percent within counties, 73.06 percent for public school districts, and 83.01 percent for separate school districts. The greatest increase in expenditures, however, was among those jurisdictions aggregated in the category labelled "others" where an increase of 129.69 percent was recorded from 1975 to 1980.

Changes in earlier reported equalization tendencies of the exiting provincial finance plan, a power equalizing plan, and a percentage equalizing plan as a result of funds being adjusted by the above price indexes are reported in the following sections.

ADJUSTED EXISTING ALLOCATION PLAN

Table 8.2 presents the pattern of local and provincial funds with and without a price index adjustment for the existing finance plan. Evident from this table, deflating funds received by school jurisdictions in Alberta from either the province or the locality or both revealed a decrease in the total amount of funds appropriated to school jurisdictions. For instance, in 1976 school jurisdictions averaged $1488 per pupil in unadjusted provincial plus local appropriations. After four years, this amount had increased to $2317 per pupil. Adjusting these amounts by price indexes, however, revealed that instead of an increase of $829 per pupil from 1976 to 1980 jurisdictions were receiving $5 less per pupil under a provincial price index adjustment or $6 less per pupil under a jurisdiction price adjustment in 1980 as compared to 1976. This decrease in funds was attributable to the pattern established by the School Foundation Program Fund (SFPF). In deflated dollars, the foundation fund from 1976 to 1980 decreased from $995 per pupil to $870 per pupil, a difference of $125 per pupil. In unadjusted funds, the SFPF had increased from $1135 per pupil in 1976 to $1553 per pupil in 1980, an increase of $418 per pupil. The remaining two sources of funds, categorical grants and

TABLE 8.2

EFFECTS OF ADJUSTING THE EXISTING PLAN BY TWO DIFFERENT PRICE INDICES FOR THE YEARS 1976, 1978 AND 1980

	Dollars Per Pupil								
	1976			1978			1980		
Appropriations	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
Grants[1] + SFPF[2] + Supp Req[3]	1488	1304	1306	1871	1303	1305	2317	1299	1300
Grants + SFPF	1170	1026	1027	1401	975	976	1623	910	909
Grants + SFPF (Prov)	1047	917	918	1230	856	857	1386	778	775
Grants	36	31	31	53	37	37	71	40	39
SFPF (Prov)[4]	1011	886	887	1177	819	820	1316	738	736
SFPF (Local) + Supp Req	441	387	388	642	447	448	930	522	525
SFPF (Local)[5]	123	108	109	171	119	119	237	133	133
Supp Req	318	279	279	471	328	329	693	389	391
SFPF (Prov + Local)	1135	995	996	1347	938	939	1553	870	870

[1] Grants = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant
[2] SFPF = School Foundation Program Fund
[3] Supp Req = Supplementary Requisition
[4] SFPF (Prov) = Foundation Fund Exclusive of the Mandatory Levy
[5] SFPF (Local) = Mandatory Foundation Levy

the local supplementary requisition, both continued their upward pattern after being adjusted by either a provincial price index or jurisdictional price indexes. Yet, the percentage weight of these two revenue sources was small in comparison to the percentage weight of the foundation fund. Categorical grants alone accounted for only about five percent of the revenue each jurisdiction had per pupil. The local supplementary requisition accounted for 21 percent.

Equalization Impact

Tables 8.3 and 8.4 gives the comparative equalization effects of the unadjusted and adjusted existing finance plan by way of two measures, namely, the coefficient of variation and the Gini coefficient. The equalization effects as revealed by each measures are discussed below.

Coefficient of variation. The level of variation after funds were adjusted by a price index remained relatively consistent with the variability level obtained without such a price adjustment (Table 8.3). Where the level of variation did change, the change was towards an increase in variation. This increase, however, was restricted to at most a three percent movement away from the mean allotment. In addition, the appropriation which demonstrated the greatest amount of movement was the School Foundation Program Fund (SFPF). Reflective of this notion was the consistent one percent increase in variation (.13 unadjusted to .14 adjusted) from 1976 to 1980. There was no change in the level of variation in 1975 with this year taken to be the base year. Of the total foundation fund, the portion which appears to have contributed most to this increased level of variation was the mandatory foundation levy. From 1976 to 1980 the adjustment of the mandatory foundation levy by a price index increased the deviation from the mean by one percent in 1976 to three percent in 1980.

Gini coefficient. Changes in the Gini coefficient as in the case of the coefficient of variation were small. The value of the coefficients, as given by Table 8.4, tended to increase when local appropriations (mandatory foundation levy and/or local supplementary requisition) were the subject of examination. In comparison, the Gini coefficients for provincial appropriations decreased annually from the value established prior to the deflation of funds. Even so, the degree of equalization established by the

TABLE 8.3

EQUALIZATION IMPACT OF THE EXISTING PLAN ADJUSTED BY PRICE INDICES AS GIVEN BY THE COEFFICIENT OF VARIATION

	1975		1976		1977		1978		1979		1980	
Appropriations	Unadj	Adj[6]	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
Grants[1] + SFPF[2] + Supp Req[3]	.21	.21	.20	.20	.19	.20	.21	.22	.20	.20	.20	.21
Grants + SFPF	.17	.17	.16	.16	.14	.16	.16	.16	.16	.16	.13	.14
Grants + SFPF (Prov)	.21	.21	.20	.20	.17	.18	.21	.21	.21	.22	.19	.19
Grants	1.47	1.47	1.65	1.66	1.12	1.12	1.03	1.04	.97	.97	.83	.83
SFPF (Prov)[4]	.18	.18	.17	.18	.15	.17	.21	.21	.20	.20	.20	.21
SFPF (Local) + Supp Req	.90	.90	.79	.79	.68	.68	.81	.82	.69	.69	.66	.68
SFPF (Local)[5]	1.24	1.24	1.24	1.26	1.01	1.01	1.19	1.21	1.02	1.03	1.05	1.08
Supp Req	.78	.78	.67	.67	.63	.63	.69	.69	.60	.60	.58	.60
SFPF (Prov + Local)	.14	.14	.13	.14	.13	.14	.13	.14	.13	.14	.13	.14

[1] Grants = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant

[2] SFPF = School Foundation Program Fund

[3] Supp Req = Supplementary Requisition

[4] SFPF (Prov) = Foundation Fund Exclusive of the Mandatory Levy

[5] SFPF (Local) = Mandatory Foundation Levy

[6] Adjusted by Jurisdictional Price Indexes (1975 Base Year)

TABLE 8.4

EQUALIZATION IMPACT OF THE EXISTING PLAN ADJUSTED BY PRICE INDICES AS GIVEN BY THE GINI COEFFICIENT

	1975		1976		1977		1978		1979		1980	
Appropriations	Unadj	Adj[6]	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
Grants[1] + SFPF[2] + Supp Req[3]	.018	.018	.022[7]	.026[7]	.028	.027	.020	.023	.021	.022	.015	.027
Grants + SFPF	-.027	-.027	-.024[7]	-.020[7]	-.023	-.024	-.034	-.031[7]	-.036	-.034	-.040	-.029[7]
Grants + SFPF (Prov)	-.049	-.049	-.047[7]	-.043	-.049	-.050	-.065	-.061	-.072	-.070	-.077	-.065
Grants	-.500	-.500	-.607	-.605	-.491	-.490[7]	-.519	-.518[7]	-.531	-.530	-.429	-.421
SFPF (Prov)[4]	-.030	-.030	-.028[7]	-.023[7]	-.033	-.034	-.044	-.040	-.050	-.048	-.058	-.047
SFPF (Local) + Supp Req	.187	.187	.186	.188	.190	.188	.181	.184	.175	.176	.153	.185
SFPF (Local)[5]	.158	.158	.174	.176	.177	.174	.183	.186	.190	.190	.176	.163
Supp Req	.200	.200	.190	.193	.196	.194	.180	.183	.169	.170	.145	.156
SFPF (Prov + Local)	-.008[7]	-.008[7]	-.006[7]	-.002[7]	-.007[7]	-.009[7]	-.015[7]	-.012[7]	-.015[7]	-.014[7]	-.022[7]	-.011[7]

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[1] Grants = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant
[2] SFPF = School Foundation Program Fund
[3] Supp Req = Supplementary Requisition
[4] SFPF (Prov) = Foundation Fund Exclusive of the Mandatory Levy
[5] SFPF (Local) = Mandatory Foundation Levy
[6] Adjusted by Jurisdicational Price Indexes
[7] Lorenz curve crosses the diagonal line.

provincial and local appropriations separately was not entirely balanced when the two were combined. This is to say, when all appropriations were combined, the degree of equalization obtained was such that the more affluent jurisdictions had a greater level of revenue per pupil than the less affluent jurisdictions. This situation was reflected by the positive Gini coefficients ranging from .018 to .027 after the deflation of funds.

Discussion

The aforementioned analysis on the effect, if any, that the adjustment of funds by a provincial price index or jurisdictional price indexes had on previous reported findings regarding the extent to which equalization was obtained under the existing plan revealed only a minimal change in equalization. Furthermore, this change was towards a greater degree of equalization when only provincial appropriations were considered, less equalization when only local appropriations were examined with an overall movement to a slight lessening of the extent to which equalization was obtained among local school jurisdictions.

In addition, the adjustment of revenue by a price index indicated that provincial appropriations have been steadily declining while local appropriations have continued to rise. Furthermore, provincial appropriations per eligible pupil was less in 1980 than in 1975.

ADJUSTED POWER EQUALIZING PLAN

The allocation of funds (unadjusted and also adjusted by a price index) to local school jurisdictions under a power equalizing plan resulted in the following per pupil schedule for the period 1975 to 1980:

TABLE 8.5

MINIMUM REVENUE PER PUPIL FOR EACH MILL LEVIED LOCALLY UNDER AN UNADJUSTED OR ADJUSTED POWER EQUALIZING PLAN

Year	Unadjusted ($/mill)	Adjusted By Prov Index ($/mill)	Adjusted By Jur Index ($/mill)
1975[1]	*$ 99.69*	*$ 99.69*	*$ 99.69*
1976	*124.17*	*108.85*	*108.99*
1977	*116.51*	*89.25*	*89.34*
1978	*110.08*	*76.63*	*76.75*
1979	*102.13*	*63.70*	*63.74*
1980	*83.13*	*46.60*	*46.66*

[1] Base year

Thus, a jurisdiction levying a tax rate of *x* mills in 1980 would have at least *x* times $83.13 in funds per pupil under an unadjusted power equalizing plan. Adjusting funds by a provincial price index reduced this minimum amount to $46.60 per pupil and to an amount of $46.66 per pupil when the adjustment was made by the application of jurisdictional price indexes.

Revenue Per Pupil Fixed

Keeping the total revenue that a jurisdiction had available per pupil under power equalization the same as was the case under the existing allocation plan but deflating the dollar values to 1975 dollars, the following observations were made.

Tables 8.6 through 8.8 present the effect of a price adjustment for selected school jurisdictions for the years 1976, 1978 and 1980. The jurisdictions selected are representative of jurisdictions whose actual mill rates were lower, higher or approximately equivalent to the provincial average. The year 1975 was considered the base year.

1976. The effects of power equalization after funds were deflated to 1975 dollars for selected school jurisdictions in 1976 are illustrated in Table 8.6. As revealed in this table, the disparity in provincial assistance narrowed when funds were adjusted by either a provincial or jurisdiction price index. For example, under the assumption that the mandatory foundation levy is a local tax Valleyview R.C.S.S.D. No. 84 with a local tax effort below the provincial average received $1231 per pupil in unadjusted provincial funds while Yellowhead School Division No. 12 with a local tax effort above the provincial average secured $1176 per pupil. Adjusting funds by a provincial price index indicated that Valleyview received $1079 per pupil and Yellowhead received $1031 per pupil; a difference of $48 per pupil. A jurisdiction price index resulted in a difference of $43 per pupil. Operating under the assumption that the mandatory foundation levy is a provincial tax had the effect of reducing the difference from $11 per pupil to $10 per pupil (provincial index) to $4 per pupil (jurisdiction index).

1978. The effects of power equalization after funds have been deflated to real dollars for selected school jurisdictions in 1978 are presented in Table 8.7. As revealed in this table, the effect of either a provincial price index adjustment or a jurisdiction price index adjustment were about the same. Under both price adjustments, the level of provincial assistance decreased but the general funding pattern remained. That is, jurisdictions which were receiving funds in excess of other jurisdictions continued to do so. Even so, the difference in the funding for any two jurisdictions was less once a price adjustment was incorporated. For example, Edmonton Public School District No. 7 received $1031 per pupil in provincial assistance under the assumption that the mandatory foundation levy is a local tax or $508 less per pupil than the County of Stettler No. 6, before funds were adjusted by a price index. This difference was reduced to $354 per pupil by a provincial price index adjustment and to $356 per pupil by a jurisdiction price index adjustment. Edmonton under these adjustments therefore had its provincial appropriations reduced from $1031 per pupil to $718 per pupil (provincial index adjustment) or $725 per pupil under a jurisdiction price index; a decrease of $313 and $306 per pupil respectively. Stettler, on the other hand, had its provincial assistance deflated from $1539 per pupil to $1072 per pupil with a provincial price index adjustment or $1081 per pupil with a jurisdiction price index adjustment; a decrease of

TABLE 8.6

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICTION REVENUES BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1976

			Provincial Aid / Pupil					
				A1[3]			A2[4]	
Number[1]	Jurisdiction	R.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC84	Valleyview	1460	1231	1079	1063	1297	1137	1120
RC30	McLennan	1157	1046	917	903	1077	944	930
Div62	Drumheller	1265	1020	895	886	1088	954	944
Dist2283	Redcliff	1100	848	744	750	939	823	830
Dist1738	Legal	1299	1091	956	964	1145	1004	1012
Cty30	Lamont	1457	1163	1019	1040	1226	1075	1097
Cty22	Camrose	1466	1144	1003	1023	1221	1070	1093
Cty29	Flagstaff	1463	1109	972	992	1214	1065	1087
RC26	Fort Vermilion	1185	1097	962	947	1143	1002	987
Div52	Fort Vermilion	1782	1518	1331	1318	1622	1422	1408
Div4	Medicine Hat	2557	956	838	830	1324	1161	1149
Div12	Yellowhead	1472	1176	1031	1020	1286	1127	1116

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[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] R.P. = Revenue Per Pupil
[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 8.7

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICTION REVENUES BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1978

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	R.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC84	Valleyview	1673	1392	969	967	1483	1033	1031
RC90	Whitecourt	1390	1200	836	835	1266	881	880
Div62	Drumheller	1617	1282	893	883	1367	952	942
RC30	McLennan	1988	1797	1251	1249	1835	1278	1276
Cty29	Flagstaff	1857	1418	988	996	1549	1078	1088
Div30	Starland	2121	1436	1000	989	1557	1084	1073
Dist7	Edmonton	1981	1031	718	725	1269	884	893
Cty6	Stettler	2557	1539	1072	1081	1786	1244	1255
Div24	Sturgeon	2102	1489	1037	1026	1665	1159	1147
Cty4	Newell	2059	1466	1021	1030	1670	1163	1173
Div52	Fort Vermilion	2272	1988	1384	1369	2088	1453	1438
RC26	Fort Vermilion	1462	1372	955	954	1418	987	986

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] R.P. = Revenue Per Pupil
[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

$467 per pupil or $458 per pupil, respectively.

1980. The effects of power equalization after funds have been deflated to real dollars for selected school jurisdictions in 1980 are presented in Table 8.8. Findings similar to those reported in 1976 and 1978 were evident in 1980. That is, the funding pattern was not altered by adjusting revenues by a price index though the difference between any two school jurisdictions was diminished somewhat after the adjustment. For example, assuming that the regulated foundation levy is a provincial tax, Willow Creek School Division No. 28 received $1865 per pupil in provincial assistance and High Prairie R.C.S.S.D. No. 56 received $1576 per pupil; a difference of $289 per pupil. Deflating these dollar values to a 1975 dollar base, however, indicated that Willow Creek received only $15 more per pupil than High Prairie with a provincial price index adjustment or $13 more per pupil with a jurisdiction price index adjustment. Willow Creek under these adjustments had its provincial appropriations reduced from $1865 to $1053 (provincial index) or $1025 (jurisdiction index). In comparison, High Prairie had its provincial assistance deflated from $1576 per pupil to $1038 (provincial index) or $1012 (jurisdiction index).

Local Mill Rate Fixed

Removing the restriction on the revenue each jurisdiction had per pupil but requiring that the local tax effort of each school jurisdiction under the existing plan did not change when this plan was replaced by power equalization, the following observations were made.

Tables 8.9 through 8.11 show the effect of a price adjustment for selected school jurisdictions for the years 1976, 1978 and 1980. The jurisdictions selected are representative of jurisdictions whose locally levied mill rates were lower, higher or approximately equivalent to the provincial average. Recall that 1975 was taken as the base year.

1976. The effects of power equalization after funds had been deflated to real dollars for selected school jurisdictions in 1976 are presented in Table 8.9. As indicated by this table, the adjustment of revenue by either a provincial price index or jurisdictional price indexes resulted in a lessening of the discrepancy in provincial allocations to school

TABLE 8.8

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED JURISDICION REVENUES BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1980

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	R.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC94	Whitecourt	1898	1550	873	851	1655	932	908
RC84	Valleyview	2053	1750	985	960	1851	1041	1015
Cty16	Wheatland	2285	1117	638	638	1503	855	854
Dist102	Banff	3578	0	0	0	0	0	0
Cty9	Beaver	2358	1767	997	996	1918	1082	1080
Div28	Willow Creek	2355	1737	981	955	1865	1053	1025
RC56	High Prairie	1954	1528	1011	985	1576	1038	1012
Div41	Rocky View	2331	1436	815	794	1676	950	925
Dist2833	Fort McMurray	3053	1393	798	825	1888	1076	1111
RC32	Fort McMurray	3049	1397	801	782	1886	1075	1049
Cty3	Ponoka	2502	1891	1067	1065	2040	1151	1149
RC26	Fort Vermilion	2325	2195	1232	1201	2250	1263	1231

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] R.P. = Revenue Per Pupil
[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 8.9

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1976

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	Mill Rate[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC84	Valleyview	11.00	438	384	384	489	429	429
RC30	McLennan	10.67	425	372	372	475	416	416
Div62	Drumheller	12.16	484	424	424	541	474	475
Dist2283	Redcliff	11.56	460	403	403	514	451	451
Dist1738	Legal	24.15	961	843	843	1074	942	943
Cty30	Lamont	24.42	972	852	852	1086	952	953
Cty22	Camrose	24.57	978	857	857	1093	958	959
Cty29	Flagstaff	24.23	964	845	846	1078	945	946
RC26	Fort Vermilion	48.02	1911	1675	1676	2136	1873	1874
Div52	Fort Vermilion	37.01	1473	1291	1292	1646	1443	1444
Div4	Medicine Hat	35.29	1404	1231	1232	1570	1376	1377
Div12	Yellowhead	35.45	1411	1237	1237	1577	1383	1384

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District

[2] Provincial Average = 24.53 mills

[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

jurisdictions. For example, prior to a price adjustment and under the assumption that the mandatory foundation levy is a provincial tax Redcliff School District No. 2283 received $39 more per pupil than McLennan R.C.S.S.D. No. 30. This difference was reduced to $35 per pupil with a jurisdiction price index adjustment of 113.16 for Redcliff and 115.85 for McLennan.

1978. The effects of power equalization after funds have been deflated to real dollars for selected school jurisdictions in 1978 are presented in Table 8.10. As indicated by this table, the effect of either the provincial price index or jurisdictional price indexes was essentially the same. Under both price adjustments, the level of provincial support received by a jurisdiction remained a function of its local tax effort (reflected by the supplementary requisition mill rate). The effect of the adjustment is seen in the monetary difference between jurisdictions. For example, when funds were not adjusted to 1975 dollar values, Drumheller School Division No. 62 was the recipient of $88 more per pupil than Whitecourt R.C.S.S.D. No. 94 assuming that the mandatory foundation levy is a local tax. In 1975 dollars, this difference was reduced to $61 per pupil. This drop in assistance was the result of a decrease of $175 per pupil for Whitecourt and $222 per pupil for Drumheller.

1980. The effects of power equalization after funds have been deflated to real dollars for selected school jurisdictions in 1980 are presented in Table 8.11. As indicated by this table, the adjustment of revenue by either a provincial price index or jurisdictional price indexes resulted in a lessening of the discrepancy in provincial allocations to various school jurisdictions. For example, prior to a price adjustment the County of Ponoka No. 3 received $2157 per pupil assuming that the mandatory foundation levy is a local tax or $1218 more per pupil than Valleyview R.C.S.S.D. No. 84. Adjusting the allocated provincial funds by a provincial price index of 178.37 reduced the difference between the two school jurisdictions from $1218 to $682 or $681 with a jurisdiction price index adjustment of 183.01 for Valleyview and 178.77 for Ponoka.

Equalization Impact

Tables 8.12 and 8.13 gives the comparative equalization effects of the unadjusted and adjusted power equalization plan under either the condition of fixed jurisdiction

TABLE 8.10

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1978

			Provincial Aid / Pupil					
				A1[3]			A2[4]	
Number[1]	Jurisdiction	Mill Rate[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC84	Valleyview	14.50	634	442	442	723	503	503
RC94	Whitecourt	14.68	642	447	447	732	509	510
Div62	Drumheller	16.69	730	508	509	832	579	579
RC30	McLennan	16.70	731	509	509	832	579	580
Cty29	Flagstaff	28.19	1233	859	859	1405	978	979
Div30	Starland	28.47	1246	867	867	1419	988	988
Dist7	Edmonton	27.69	1212	843	844	1380	961	961
Cty6	Stettler	29.62	1296	902	902	1476	1027	1028
Div24	Sturgeon	35.85	1569	1092	1092	1786	1244	1245
Cty4	Newell	41.02	1795	1249	1250	2044	1423	1424
Div52	Fort Vermilion	43.97	1924	1339	1340	2191	1525	1526
RC26	Fort Vermilion	57.05	2496	1738	1738	2843	1979	1981

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District
[2] Provincial Average = 28.11 mills
[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 8.11

EFFECTS OF ADJUSTING THE POWER EQUALIZING PLAN UNDER CONDITIONS OF FIXED LOCAL MILL RATE BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1980

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	Mill Rate[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC94	Whitecourt	16.07	863	484	482	1010	566	566
RC84	Valleyview	17.50	939	527	525	1100	617	616
Cty16	Wheatland	19.00	1020	572	570	1194	670	669
Dist102	Banff	19.06	1023	574	572	1198	672	671
Cty9	Beaver	28.00	1503	843	840	1760	987	986
Div28	Willow Creek	28.50	1530	858	856	1792	1004	1003
RC56	High Prairie	28.55	1533	859	857	1795	1006	1005
Div41	Rocky View	27.42	1472	825	823	1724	966	965
Dist2833	Fort McMurray	35.33	1897	1064	1061	2221	1245	1244
RC32	Fort McMurray	35.33	1897	1064	1061	2221	1245	1244
Cty3	Ponoka	40.18	2157	1209	1206	2526	1416	1415
RC26	Fort Vermilion	66.54	3572	2003	1998	4183	2345	2342

[1] Div = School Division; Cty = County; Dist = Public School District; RC = Roman Catholic Separate School District

[2] Provincial Average = 25.83 mills

[3] A1 --Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 --Assumes Mandatory Foundation Levy is a Provincial Tax

revenue per pupil or the condition of fixed local mill rate by way of two measures, namely, the coefficent of variation and the Gini coefficient. The equalization effects of each measure are discussed below.

Coefficient of variation. Table 8.12 indicates the effect that the deflation of provincial funds to 1975 dollars had on the level of variation observed under power equalization. With power equalization implemented under two alternative conditions (1) revenue per pupil for each jurisdiction remained the same as under the existing plan and (2) the local tax effort under the existing plan was also the local tax effort under power equalization, changes in the coefficient of variation for both conditions are reported here.

Under the condition of fixed jurisdiction revenue per pupil, Table 8.12 indicates that the level of variation increased at most one percent during the period 1975 to 1980 whether the mandatory foundation levy was regarded as a provincial tax or as a local tax. In comparison, under the condition of fixed local mill rates no change in the level of variation occurred.

Gini coefficient. The extent to which equalization was obtained as given by the Gini coefficients for the years 1975 to 1980 is presented in Table 8.13. As with the coefficient of variation, the Gini coefficients did not change under the condition that the local tax effort under the existing plan and the power equalizing plan remained the same. The condition of fixed jurisdiction revenue per pupil, however, indicated a slight movement away from the degree of equalization obtained before funds were adjusted by a price index. Yet, overall the degree of equalization continued to increase from 1975 to 1980 as indicated by the increasing magnitude of the coefficients as well as their negative value.

Discussion

Retaining the local mill rate that was levied under the existing allocation plan, the adjustment of funds by a price index did not change the overall degree of equalization attained within the province. Retaining the adjusted revenue level of school jurisdictions revealed a continual movement towards a greater degree of equalization from 1975 to 1980, but at a slightly lower level than had beeh observed with inflated funds.

TABLE 8.12

EQUALIZATION IMPACT OF A POWER EQUALIZING PLAN ADJUSTED BY PRICE INDICES AS GIVEN BY THE COEFFICIENT OF VARIATION

Equalization Measure	1975	1976	1977	1978	1979	1980
Revenue Per Pupil Fixed						
Levy[1] a Provincial Tax						
Unadjusted	.16	.16	.15	.22	.21	.20
Adjusted[2]	.16	.17	.16	.22	.21	.21
Levy a Local Tax						
Unadjusted	.21	.19	.18	.25	.26	.24
Adjusted	.21	.20	.19	.25	.26	.24
Local Mill Rate Fixed						
Levy a Provincial Tax						
Unadjusted	.28	.25	.23	.24	.24	.27
Adjusted	.28	.25	.23	.24	.24	.27
Levy a Local Tax						
Unadjusted	.28	.25	.23	.24	.24	.27
Adjusted	.28	.25	.23	.24	.24	.27

[1] Levy = Mandatory Foundation Levy

[2] Adjusted by Jurisdictional Price Indexes

TABLE 8.13

EQUALIZATION IMPACT OF A POWER EQUALIZING PLAN ADJUSTED BY PRICE INDICES AS GIVEN BY THE GINI COEFFICIENT

Equalization Measure	1975	1976	1977	1978	1979	1980
Revenue Per Pupil Fixed						
Levy[1] a Provincial Tax						
Unadjusted	-.033	-.026	-.031	-.047	-.059	-.069
Adjusted[2]	-.033	-.022	-.032	-.043	-.057	-.054
Levy a Local Tax						
Unadjusted	-.057	-.050	-.058	-.078	-.097	-.109
Adjusted	-.057	-.045	-.059	-.074	-.096	-.094
Local Mill Rate Fixed						
Levy a Provincial Tax						
Unadjusted	-.014[3]	-.014[3]	-.002[3]	-.022[3]	-.048	-.059
Adjusted	-.014[3]	-.014[3]	-.002[3]	-.022[3]	-.048	-.059
Levy a Local Tax						
Unadjusted	-.014[3]	-.014[3]	-.002[3]	-.022[3]	-.048	-.059
Adjusted	-.014[3]	-.014[3]	-.002[3]	-.022[3]	-.048	-.059

[1] Levy = Mandatory Foundation Levy

[2] Adjusted by Jurisdictional Price Indexes

[3] Lorenz curve crosses the diagonal line.

ADJUSTED PERCENTAGE EQUALIZING PLAN

Tables 8.14 through 8.16 show the effect of such price adjustments for selected school jurisdictions under percentage equalization. The jurisdictions selected are representative of jurisdictions whose equalized assessment per eligible pupil were lower, higher or approximately equivalent to the provincial average. Recall that the year 1975 was considered the base year.

1976. The effects of percentage equalization after funds have been deflated to real dollars for selected school jurisdictions in 1976 are presented in Table 8.14. As indicated by this table, the effect of either a provincial price index adjustment or a jurisdiction price index adjustment was for the purpose of discussion the same. In relation to unadjusted provincial aid per pupil, the difference in allocated funds was not as great under a price adjustment. For example, assuming that the mandatory foundation levy is a local tax the County of Grande Prairie No. 1 and Edmonton R.C.S.S.D. No. 7 with equalized assessment's per eligible pupil of about the same (a difference of $53 per pupil) received $1031 and $1029 respectively in unadjusted funds; a difference of $2 per pupil. Adjusting the revenue of each jurisdiction by a provincial index of 111.76 for the county and 115.85 for the separate system reduced this difference to a single dollar. Assuming that the mandatory foundation levy is a provincial tax the difference of the unadjusted funds of $1 increased to $2 with a provincial price index.

1978. The effects of percentage equalization after funds have been deflated to real dollars for selected school jurisdictions in 1978 are presented in Table 8.15. As indicated by this table, the effect of either a provincial price index adjustment or a jurisdiction price index was for the purpose of discussion the same. In relation to unadjusted provincial aid per pupil, the discrepancy in allocated funds was not as great under a price adjustment. For example, Theresetta R.C.S.S.D. No. 23 received $1741 per pupil in provincial aid assuming that the mandatory foundation levy is a local tax or $535 more in unadjusted funds per pupil than Pincher Creek School Division No. 29. Deflating dollar values to a 1975 base revealed that Theresetta received $372 more per pupil from the province than Pincher Creek with a provincial price index of 143.65 or $374 per pupil with a jurisdiction price index of 143.82 for Theresetta separate school system and

TABLE 8.14

EFFECTS OF ADJUSTING THE PERCENTAGE EQUALIZING PLAN BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1976

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	E.A.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC26	Fort Vermilion	2001	1414	1240	1241	1435	1258	1259
RC68	Beaverlodge	2020	1414	1239	1241	1434	1257	1259
RC111	Drayton Valley	2286	1404	1231	1232	1427	1251	1253
RC23	Theresetta	2363	1401	1228	1230	1425	1249	1251
Div38	Foothills	11408	1069	937	937	1185	1039	1040
RC32	Fort McMurray	11837	1053	923	923	1173	1029	1030
Cty1	Grande Prairie	12446	1031	903	903	1157	1015	1016
RC7	Edmonton	12499	1029	902	902	1156	1013	1015
Dist3063	Jasper	21724	690	605	603	911	798	799
Div4	Medicine Hat	27418	480	421	419	759	666	667
Div1	Berry Creek	36378	151	132	129	521	457	458
Dist4233	Waterton Park	96232	-2049	-1796	-1809	-1069	-937	-938

[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District

[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 11,984)

[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 8.15

EFFECTS OF ADJUSTING THE PERCENTAGE EQUALIZING PLAN BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1978

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	E.A.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC 68	Beaverlodge	2057	1794	1249	1251	1814	1263	1265
RC26	Fort Vermilion	2075	1793	1248	1250	1814	1263	1265
Dist4910	Grovedale	2923	1761	1226	1228	1790	1246	1248
RC23	Theresetta	3442	1741	1212	1214	1776	1236	1238
RC9	Lethbridge	16711	1240	864	864	1408	980	982
RC104	Fort Saskatchewan	17038	1228	855	855	1399	974	975
Div54	East Smoky	17297	1218	848	848	1392	969	970
Div29	Pincher Creek	17616	1206	850	840	1383	963	964
Dist102	Banff	59938	-392	-273	-278	209	145	146
Dist4233	Waterton Park	62695	-496	-345	-350	132	92	92
Dist1699	Exshaw	65997	-620	-432	-438	41	28	28
Dist4152	Seebe	73180	-892	-621	-627	-159	-110	-111

[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District

[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 17,001)

[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax

[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

an index of 145.16 for the Pincher Creek School Division. This difference was less extreme when the mandatory foundation levy was treated as a provincial tax rather than a local tax.

1980. The effects of percentage equalization after funds have been deflated to real dollars for selected school jurisdictions in 1980 are presented in Table 8.16. In agreement with earlier years, the price index (provincial or jurisdictional) utilized made little difference in the amount of funds appropriated. Nevertheless, the amount of funds allocated to a jurisdiction remained in direct relation to the jurisdiction's wealth, as measured by the equalized assessment per eligible pupil. That is, a jurisdiction with a low equalized assessment perpupil received more provincial monetary assistance than a jurisdiction with a high equalized assessment per pupil. Yet, as was evident in previous years, the dollar difference between any two jurisdictions was not as great once a price index had been applied. For example, assuming that the mandatory foundation levy is a local tax, the dollar difference between Starland School Division No. 30 and Berry Creek School Division No. 1 was $1321 per pupil (unadjusted). Adjusting funds by a price index revealed that in 1975 dollars, Starland School Division received $740 more per pupil than Berry Creek School Division with a provincial price index of 178.37 and $745 more per pupil with a jurisdiction price index of 183.35.

Equalization Impact

Table 8.17 gives the comparative equalization effects of the unadjusted and adjusted percentage equalization plan by way of two measures, namely, the coefficient of variation and the Gini coefficient. The equalization effects of each measure are discussed below.

Coefficient of variation. As indicated by Table 8.17, the level of variation did not change when funds were adjusted by jurisdictional price indexes.

Gini coefficient. Adjusting funds by price indexes was found to have little effect on the value of the Gini coefficient. Only in the years 1977, 1979 and 1980 did the Gini coefficient change and then only by an increase of .001 in 1979 and 1980 and a decrease of the same magnitude in 1977.

TABLE 8.16

EFFECTS OF ADJUSTING THE PERCENTAGE EQUALIZING PLAN BY TWO DIFFERENT PRICE INDICES FOR THE YEAR 1980

			Provincial Aid / Pupil					
			A1[3]			A2[4]		
Number[1]	Jurisdiction	E.A.P.[2]	Unadj	Prov Index	Jur Index	Unadj	Prov Index	Jur Index
RC26	Fort Vermilion	3015	2216	1242	1243	2242	1257	1258
RC56	High Prairie	5083	2147	1204	1204	2190	1228	1229
Dist4910	Grovedale	5178	2144	1202	1203	2188	1227	1227
RC68	Beaverlodge	5767	2124	1191	1191	2173	1218	1219
RC128	Spruce Grove	26710	1424	798	797	1653	927	925
Cty6	Stettler	27991	1381	774	773	1621	909	907
Div60	Three Hills	28894	1351	757	756	1598	896	894
Div30	Starland	29349	1336	749	747	1587	890	888
Div1	Berry Creek	68865	15	9	2	605	339	333
Dist102	Banff	99906	-1022	-573	-583	-167	-93	-103
Dist1699	Exshaw	116471	-1576	-883	-895	-578	-324	-335
Dist4233	Waterton Park	139407	-2342	-1313	-1327	-1148	-644	-658

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[1] Div = School Division; Dist = Public School District; RC = Roman Catholic Separate School District
[2] E.A.P. = Equalized Assessment Per Eligible Pupil (Provincial Average = 27,878)
[3] A1 -- Assumes Mandatory Foundation Levy is a Local Tax
[4] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

TABLE 8.17

EQUALIZATION IMPACT OF A PERCENTAGE EQUALIZING PLAN ADJUSTED BY PRICE INDICES

	1975		1976		1977		1978		1979		1980	
Provincial Aid	A1[1]	A2[2]	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2
COEFFICIENT OF VARIATION												
Unadjusted	.06	.12	.09	.20	.07	.16	.09	.21	.09	.20	.11	.25
Adjusted[3]	.06	.12	.09	.20	.07	.16	.09	.21	.09	.20	.11	.25
GINI COEFFICIENT												
Unadjusted	-.026	-.051	-.021	-.048	-.026	-.060	-.027	-.067	-.033	-.079	-.033	-.083
Adjusted	-.026	-.051	-.021	-.048	-.026	-.059	-.027	-.067	-.034	-.079	-.033	-.084

[1] A1 -- Assumes Mandatory Foundation Levy is a Local Tax

[2] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

[3] Adjusted by Jurisdictional Price Indexes

Discussion

The adjustment of funds by price indices under percentage equalization had either no effect or a very minimal effect on the extent to which equalization was obtained. The only real noticeable change in previously reported results was a lessening in the discrepancy in the different amounts allocated.

SUMMARY

This chapter has presented and discussed the extent to which the degree of fiscal equalization under three different finance plans was changed when allocated provincial funds were first adjusted by an appropriate price index.

As observed in the preceding discussion, deflating allocated provincial funds by a price index had the following effect on the finance scene within the province: (1) provincial support of education decreased over the years. This finding is in contrast to what was found when appropriated funds were not adjusted by a price index., (2) the difference in appropriated funds was not as great once funds were adjusted to real 1975 dollar values, and (3) there was little difference in the degree of equalization obtained whether the adjustment was the product of a provincial price index or jurisdictional price indexes. Furthermore, only a very slight change towards a greater degree of equalization under all three finance plans was observed from what was established when funding was not adjusted by a price index.

CHAPTER 9

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This final chapter presents a summary of the purpose, theoretical framework, related literature, research design, and findings of the study. On the basis of the reported findings a number of conclusions are drawn and implications stated for theory, research, and practice in the financing of education at the provincial level.

SUMMARY OF THE PURPOSE, THEORETICAL FRAMEWORK, RELATED LITERATURE, AND RESEARCH DESIGN

Purpose of the Study

The purpose of the study was to determine whether the adoption of alternative allocation plans for the financing of education within the province of Alberta would have significantly increased the level of fiscal equalization attained under the existing (1975 - 1980) provincial finance plan. The alternative plans examined were power equalization and percentage equalization.

Theoretical Framework

Since at least the turn of the century researchers such as Cubberley, Mort, and Updegraff have expressed concern over the possible financial inequities that may result from governments' allocation plans in support of school jurisdictions. One specific matter with which these researchers struggled and which has drawn the interest of the public and the politican alike in the last decade is fiscal equalization. Perhaps the greatest force behind the emergence of the concern for fiscal equalization was the number of litigations in the United States pertaining to the wealth of a school jurisdiction as a factor in the educational opportunity of a pupil. Whatever the reason, most governments appear to have adopted a funding mechanism whereby educational dollars are allocated for the explicit or implicit purpose of narrowing the fiscal disparities that exist among school systems. In the case of the province of Alberta, the attainment of fiscal equalization is sought through a combined foundation grant program and a differentiated grant scheme.

Before the Alberta finance plan can be evaluated, the degree of fiscal equalization attained must be empirically established. The absent of an empirically based evaluation would: (1) do a disservice to the plan and (2) fail to recognize that the intended purpose of a financial plan and how funds are in fact allocated may not complement each other to the greatest degree. Should an evaluation of the Alberta finance plan indicate an acceptable degree of fiscal equalization, based on empirical evidence, then it can be said that the Alberta grant system ensures that every local school jurisdiction under its authority, regardless of the wealth of the jurisdiction, is able to offer an adequate minimum level of education for its pupils. Whether this particular grant system is the most effective, however, remains in question and was addressed by the present study.

Review of Related Literature

The literature reviewed in the study dealt with: (1) the theoretical perspective of the concept of equity and (2) the application of this theory by state governments in the United States and provincial governments in Canada.

The dominant themes that evolved from the theory on the meaning and composition of the concept of equity were:

1. Equity is a multidimensional concept and as such is a continual point of debate. Nevertheless, for a given finance plan to realize the full extent of equity it must address three dimensions or components: (1) fiscal equity, (2) program equity, and (3) cost differentials.

2. The lack of agreement among school jurisdictions as to how government should allocate funds as well as the limited resources available for education has tended to restrict reforms promoting equalization. Therefore, writers and researchers in the area of school finance have conjectured that major reforms will be achieved only when government has a surplus of funds or when revenue is increasing.

3. If problems of fiscal imbalance between rich and poor school systems are to be effectively addressed then simultaneously both the questions of "How much?" and

"How?" need to be considered.

4. With educational need and social and economic conditions continually changing, the effectiveness of any program of school financing is short lived.

5. The literature suggested that efforts to measure equity should be tailored to the legislative intent rather than applying standards that are inappropriate in terms of government policy. Four measures commonly used are the range, the correlation coefficient, the coefficient of variation, and the Gini coefficient.

The practical application of the above theory by state and provincial governments resulted in the following observations:

1. Most reform proposals in the United States and Canada work under the assumption that a state/provincial – local partnership in the financing of education will continue. As such, a modification of one, or a combination of two or more of the following finance models is usually the proposed alternative to the existing allocation plan: (1) flat grant, (2) foundation fund, (3) percentage equalizing, (4) power equalizing, and (5) guaranteed valuation. With the exception of the flat grant model, each of the remaining four models are based on the components of tax effort, tax yield, and wealth.

2. State and provincial aid to local school jurisdictions has tended to be motivated by either the intention to relieve the burden of school taxes on the local ratepayer or the desire to increase education opportunties by raising the spending level in low expenditure jurisdictions.

3. The impact of reform efforts has been weakened due to three conditions: (1) except under a full-state funding plan no ceiling has been placed on the expenditure of school jurisdictions, (2) the effects of inflation on property valuations, and (3) the implementation of save-harmless provisions. Consequently, only marginal improvements to existing financial plans have been found to occur as a result of equalization reform efforts.

4. Canadian financial plans have tended to have a greater success rate with equalization reform efforts than have their American counterparts. This conclusion was reached, in the literature, on the results produced by the coefficient of variation statistical technique. No elaboration as to the "why" of this occurence was offered.

Research Design

All of the 136 publicly-controlled school jurisdictions in the province of Alberta were selected for examination in the study. Data were extracted from the ledger accounts of the School Grants section of the Finance, Statistics and Legislation Branch of the Alberta Department of Education and other documents produced by the Department for the years 1975 to 1980, inclusive. These years were selected because most grants identified for the study were operating and because of the availability of data.

The study was divided into two parts. The first part examined the equalization effect of the existing provincial finance plan from 1975 to 1980. Information used in this part consisted of: (1) the provincial support allocated to local school jurisdictions in mills, (2) the provincial support allocated to local school jurisdictions in dollars, and (3) the equalized assessed valuation of real property for each local school jurisdiction. The second part examined the effect of power equalization and percentage equalization when each replaced the existing plan. For this examination, the provincial support allocated to local school jurisdictions in dollars and the equalized assessed valuation of real property for each local school jurisdiction were utilized. A price index was later introduced to see whether controlling for the effects of inflation would have significantly altered earlier findings under the existing plan, a power equalizing plan, and a percentage equalizing plan. Two different price indexes were introduced: (1) a provincial price index, and (2) jurisdiction type price indexes. The first index, provincial price index, controlled for inflation by deflating the nominal dollars allocated to all school jurisdictions by a constant. The second set of indices, jurisdiction type price indexes, controlled for inflation by deflating the nominal dollars allocated to school jurisdictions within the same category (e.g., school divisions, counties, public school districts, and separate school districts) by the same constant.

The main statistical techniques used in the subsequent analysis were the coefficient of variation and the Gini coefficient.

SUMMARY OF FINDINGS

As alluded to above, the study addressed two major problems. Each problem is stated in full below along with the related findings.

Problem One

To what extent has the distribution of provincial funds among local school jurisdictions in Alberta achieved fiscal equalization?

This problem was stated in the form of four specific sub-problems. The findings associated with each of these sub-problems are summarized below.

Sub-problem 1.1. *What is the distributional pattern of provincial grants in terms of mills per school jurisdiction?*

Approximately 90 percent of all local school jurisdictions received provincial assistance beyond the foundation fund allocations for the years 1975 through 1980. The level of this support, however, was not realized to the same extent by each type of school jurisdiction, namely, school divisions, counties, public school districts, and separate school districts. Separate school districts received the greatest amount of provincial aid with 44 percent receiving in excess of 20 mills of tax relief and less than 10 percent receiving no more than five mills for the six year period. In contrast, 14 percent of the school divisions, 3 percent of the counties, and 8 percent of the public school districts received in excess of 20 mills of tax relief, while about 40 percent of each of these three types of school jurisdictions received no more than five mills of tax relief.

Sub-problem 1.2. *What is the distributional pattern of provincial allocations (exclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?*

The provincial government tended to provide more financial support to those jurisdictions with a low equalized assessment per pupil. This negative relationship between local fiscal ability and provincial funding was strongest for separate school districts and counties; it was weakest for school divisions and public school districts. Over the six year time period examined, the relationship between the fiscal ability of local school jurisdictions, as measured by equalized assessment per pupil, and allotted provincial funds became weaker across all types of school jurisdictions.

Sub-problem 1.3. *What is the distributional pattern of provincial allocations (inclusive of the School Foundation Program Fund) aggregated in terms of the jurisdictions' equalized assessments per pupil?*

Three measures were used to answer the above problem: the correlation coefficient, the coefficient of variation, and the Gini coefficient. The relationship between total allotted funds and wealth and the relationship between the foundation fund and wealth were positive and significant for the period 1975 to 1980. In addition, as the relationship between total allotted funds and wealth strengthened so did the relationship between the foundation fund and wealth. This finding was not unanticipated with the foundation fund allocations representing the greatest proportion of the total amount of funds appropriated to local school jurisdictions. There was a small but significant positive relationship between the wealth of school jurisdictions and provincial categorical grants. On the other hand, local appropriations were highly related to jurisdiction wealth. As reflected by the coefficient of variation analysis, there was little change in the coefficient over the six year period for either the total revenue per year or the provincial portion of such revenue. The reverse was found to hold true when only the local portion of all available funds was under consideration. In terms of wealth, as reflected by the Gini coefficient, provincial funds were being directed to where local fiscal ability, as measured by equalized assessment per pupil, was lowest. However, over the six year time period, provincial funds represented a declining percentage of the total amount of revenue available to local school jurisdictions.

Sub-problem 1.4. *What are the characteristics in terms of ability-to-pay, tax effort, and educational need of the school jurisdictions receiving differing levels of provincial support?*

The most important variable accounting for the variance in the distribution of aggregated provincial funds to all jurisdictions was eligible enrolment. Even so, the greatest amount of variance accounted for by this variable was only 6.2 percent in 1980. Thus, the distribution of categorical grants was minimally affected by the pupil count of the jurisdiction. The contribution of the variable, equalized assessment per eligible pupil, to the variance in allotted provincial funds was even smaller. When the analysis was confined to each type of jurisdiction separately, similar findings resulted although the order of importance of the two independent variables changed occasionally.

Problem Two

> *Would the implementation of a different grant funding mechanism achieve significantly improved results over the present provincial allocation plan?*

The second problem of the study was operationalized into three specific sub-problems. The findings associated with each of these sub-problems are summarized below. A jurisdictional comparison of allotted provincial funds under the existing plan, a power equalizing plan, and a percentage equalizing plan is given in Appendix G.

Sub-problem 2.1. *What is the degree of fiscal equalization obtained under a power equalizing plan?*

In responding to the above problem, two analyses were undertaken each beginning with a different set of assumptions. In the first case, the total amount of revenue (provincial plus local) per pupil for each school jurisdiction remained the same for both the existing and power equalizing plans. In the second case, the local tax effort of each school jurisdiction remained the same for both the existing and power equalizing plans.

Under the assumption that each school jurisdiction had the same amount of revenue per pupil to spend as was the case under the existing plan, the utilization of a power equalizing plan would have had three general effects on the allocation of provincial funds:

1. All jurisdictions would have been required either to increase or decrease their tax requisition on the local ratepayer, the majority being required to reduce their tax requisition. Though the required local tax effort for most jurisdictions was less under power equalization, the total local appropriation for all jurisdictions combined would have remained the same under both the existing plan and the power equalizing option.

2. School jurisdictions that had secured a high level of revenue (provincial plus local) per pupil under the existing plan would have been required to put forth a greater local tax effort under power equalization to retain the same revenue level per pupil.

3. School jurisdictions operating on a low revenue level (provincial plus local) per pupil would have been expected to tax their ratepayers at a correspondingly lower rate.

Under the assumption that the local tax effort did not change when power equalization replaced the existing finance plan, the utilization of a power equalizing plan would have had three general effects on the allocation of provincial funds:

1. More school jurisdictions would have had less revenue per pupil under power equalization than they were able to secure under the existing plan.

2. School jurisdictions levying a low local mill rate on their ratepayers would have received less provincial funding than those jurisdictions levying a high mill rate on their ratepayers.

3. Regardless of the equalized assessed valuation of school jurisdictions, if two or more jurisdictions exerted the same local tax effort, provincial funds would have been allocated in such a manner that the jurisdictions' total revenue levels per pupil (provincial plus local) would have been equal.

In general, the degree of equalization increased when the existing plan was replaced by power equalization under either of the two assumptions: (1) fixed jurisdiction revenue level per pupil or (2) fixed local tax effort. That is, in the case of either the existing plan or a power equalizing plan poorer school jurisdictions received a greater proportion of the total allocated provincial funds as compared to the more wealthy school jurisdictions; however, this effect was greater under power equalization.

Sub-problem 2.2. *What is the degree of fiscal equalization obtained under a percentage equalizing plan?*

A similar analysis as outlined above was then repeated for a percentage equalizing plan. The assumptions incorporated were that the provincial allocations for all school jurisdictions combined and the local appropriations for all school jurisdictions combined did not change when the existing plan was replaced by percentage equalization. The implementation of a percentage equalizing plan in Alberta, therefore, would have had the following effects:

1. Wealthy school jurisdictions were required to contribute proportionally more locally than the poorer school jurisdictions.

2. Most school divisions and counties lost in excess of $100 per pupil in provincial funds under percentage equalization, while most public and separate school districts gained in excess of $100 per pupil. The public school districts that would have lost provincial funds under percentage equalization were the more affluent of all school jurisdictions and their losses would have exceeded the $200 per pupil level, on average.

3. In general, the degree of equalization increased when the existing plan was replaced with a percentage equalizing plan.

Sub-problem 2.3. *What is the degree of fiscal equalization obtained when the amount of the grant is adjusted by a price index under (a) the existing allocation plan? (b) a power equalizing plan? (c) a percentage equalizing plan?*

To determine whether the level of equalization attained under the existing plan, a power equalizing plan, and a percentage equalizing plan would have changed with the use of "real" as opposed to "inflated" dollars, provincial funds were adjusted first by a provincial price index and then by jurisdiction type price indexes. The deflation of the nominal allocated provincial funds revealed the following:

1. Total provincial "real" dollar support of education has declined over the six year period of the study. This finding is in contrast to what was observed when appropriated funds were not adjusted by a price index.

2. There existed little difference in the degree of equalization obtained among the local school jurisdictions whether the adjustment was the product of a provincial price index or jurisdiction type price indexes.

3. Adjusting provincial funds by a price index changed the level of equalization obtained among local school jurisdictions in the province only minimally, if at all. Where a change in the level of equalization did occur, the movement was towards greater equalization.

4. Under all three plans – existing, power equalizing, and percentage equalizing – the disparity in provincial assistance narrowed. In addition, adjusting provincial funds by jurisdiction type price indexes did not change the rank order of revenue received by the jurisdictions. That is, if jurisdiction A received more funds than jurisdiction B under any of the three finance plans before the introduction of a price index, then jurisdiction A continued to receive more funds than jurisdiction B after funds were adjusted by a price

index. A possible change in which school jurisdiction received the greater allocation of provincial funds was anticipated to occur when jurisdictions of each type had their funds adjusted by an index unique to their expenditure patterns.

5. Under power equalization and percentage equalization the level of variation in provincial allocations did not change under a price adjustment but the Gini coefficients did show minimal changes towards a greater degree of fiscal equity among school jurisdictions.

CONCLUSIONS

On the basis of the findings reported above, the following conclusions were drawn.

1. Despite the fact that the categorical funding designed to produce fiscal equity visibly addresses special local problems, such as increase operational costs associated with diseconomies of scale, the results have indicated possible shortcomings in the overall process. For example, some school jurisdictions with a high equalized assessment per pupil received greater provincial support than less affluent school jurisdictions. Possible contributing factors to the failure of the funding mechanism to fully account for the fiscal inequities across school jurisdictions may have been the economic, social, and political climates operating at the time.

2. Replacing the existing funding mechanism with either power equalization or percentage equalization tended to decrease but not eliminate existing inequities. For this reason, the complete substitution of funding formulas must be done with attention to a number of factors other than dollars, such as cost variations and variations in educational need.

3. In general, the identified categorical grants, namely, the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Location Allowance Grant, the Corporate Assessment Grant, the Private School Opening Grant, and the Incremental Grant, inclusive or exclusive of the School Foundation Program Fund, were equalizing on the basis of

mills of tax relief and/or the wealth of the jurisdictions. In other words, jurisdictions with a low wealth base, as measured by their equalized assessment per pupil, received greater provincial assistance than those jurisdictions with a high wealth base.

4. The replacement of the existing financial plan with either a power equalizing plan or a percentage equalizing plan increased the level of equalization attained. Furthermore, between power equalization and percentage equalization, the latter resulted in greater equalization for local school jurisdictions in Alberta. Nevertheless, both of these alternative finance plans must be carefully considered before adoption of either. Power equalizing schemes, unless certain accommodations are made, can impose unfair tax hardships on the local ratepayer. For example, the residents of a particular district may vote to tax themselves heavily to support schooling. The question arises with respect to the burdensome effect on low income residents. This is particularly a problem for homeowners on pensions and fixed incomes. Though power equalization compensates for differences in the wealth at the jurisdictional level it does not address the problem whereby the taxpaying ability of each resident within the jurisdiction varies although their wealth as determined by the equalized assessment of their property is the same. A parallel situation exists for the adoption of a percentage equalizing plan. For example, the residents of a wealthy area may decide that their schools should represent utmost excellence in schooling thus resulting in a high tax rate. Again, the tax burden placed on residents of fixed income, such as pensioners, within this area may cause problems.

5. The extent to which equalization is attained is related to the allocation formula used by the government given the amount involved. As the findings of the present study indicate, the redistribution of the same amount of provincial aid by way of different formulas changed the level of equalization considerably in some years.

IMPLICATIONS

As is evident from the preceding discussion, existing financing structures can always be faulted to some extent for various failures in the provision of equitable collection and distribution of education aid. In this case, these failures have prompted changes, from time to time, in funding structures at both the state and provincial levels.

As a result of the present study several suggestions for theory, future research, and practice in the area of equity in funding education at the provincial level could be offered. Among them are the following:

Theory

1. The wealth of a school jurisdiction has traditionally been equated with the ability of the local ratepayer to support education by way of property taxes. Still, the criticism is voiced that this is not an accurate measurement of wealth (Hirsch, 1973; Jones, 1978; Harrison, 1976). Other measures such as personal income need to be explored for their possible use as measures of the fiscal ability or wealth of a school jurisdiction. Nonetheless, Mockler and Hayward (1978:388) cautioned that "shifts of taxes are complicated. Those who pay higher income or sales taxes may not be those who own property and would get the benefits of lower taxes on property." Therefore, should legislators decide that a shift in the government education tax base is feasible, two routes are possible: (1) the complete replacement of the wealth determinant equalized assessment by another determinant of wealth, or (2) the retention of real property as a measure of wealth along with the addition of an income and/or consumption tax. Whichever the choice, a change will be needed in the data collection methodology of other government departments to ensure that optional data will be obtainable on a school jurisdiction basis. Presently this is not the case and is the prime reason why other measures of equity are not utilized in research designs.

2. Price indices computed on a regional basis in the province or perhaps even by jurisdiction as is the case in the state of Maryland where each of its 24 school districts have separate indices, should be examined for possible use in a provincial educational finance plan. The province is sufficiently complex geographically and diverse economically that cost differences exist across jurisdictions. Since the main purpose behind the use of a price index is to deflate current-price data to gain a clearer idea of "real" changes in purchasing power, its usefulness demands further investigation. Once a valid index is constructed for regions within the province or even for each local school

jurisdiction, these geographical and economic differences can be compensated for in a distribution formula in the form of a multiplier.

Research

From the theoretical implications identified and the findings in general, there would seem to be several implications for research in the area of school finance.

1. There remains a need to examine the impact of change in provincial school finance arrangements on individual schools and even classrooms. So far, the economic concerns of governments have remained at the inter- rather than the intra-jurisdictional level, yet if educators are generally to address the concern of program equity, intra-jurisdictional similarities and differences will need to be examined.

2. The feasiblity of applying a restriction to the per pupil expenditure levels rather than to the mill rates of school jurisdictions requires exploration especially in light of the increasing importance of the local supplementary requisition as a source of revenue. Specifically, future researchers need to examine whether existing inequities between school jurisdictions would decrease if the present maximum allowable increase in the local mill rate requisition were removed and replaced by a restriction on the percentage a board could increase its per pupil expenditure in a given year. This new restriction would have the effect of limiting a jurisdiction's expenditure per pupil to no more than *x* percent over its last year's expenditure per pupil level.

3. The analysis by jurisdiction type undertaken in the present study provided some insights into fiscal equalization. Nevertheless, because urban school jurisdictions' operations have different circumstances with which to contend, than those of rural jurisidictions, a urban-rural comparison should also be a focus of future research. Rossmiller (1979) noted the following circumstances that distinguished urban school systems from rural school systems: (1) a disproportionate high percentage of students with exceptional educational needs attend urban schools, (2) operational and maintenance costs are higher in densely populated areas, and (3) city schools are supported from the same tax base as a multiplicity of municipal services.

4. While the emergence of education finance reform as a major political issue has implications for all levels of government, the ultimate direction of any reform will be

determined by the provincial legislature on the basis of the political feasibility of the various revenue and distribution alternatives. Therefore, an analysis of the political process of school finance reform might be considered as a possible first step to the possible adoption of an alternative allocation scheme.

Practice

The implications for practice which are cited in the following discussion relate specifically to the financing of education at the provincial government level:

1. The administrative processes associated with the allocation of provincial funds need to be streamlined with the use of modern technology to permit the retrieval of more precise and detailed information from the various school authorities. This would be particularly necessary if intra-jurisdictional analysis were to become the focus of research.

2. An intra-jurisdictional analysis should be undertaken in addition to the present inter-jurisdictional analysis to ensure that local differences are accurately reflected. Presently, what is deemed a "fair" distribution of provincial funds may be interpreted from two perspectives: (1) total provincial share versus total provincial average cost or (2) total provincial share versus district cost. As revealed in this study, comparison of the "fairness" of distributed funds under only one of the two perspectives would conceal important inequities. For example, in relation to the provincial average expenditure per pupil, allotted provincial funds may appear to be reasonably attaining the goal of equity but in comparison to the costs per pupil of each school jurisdiction a possible verdict of "unfair" distribution of provincial funds in terms of the goal of equity may be passed.

3. Evidence presented in this study showed that local revenues were disequalizing and that provincial allocations were generally equalizing in effect. These facts suggest that a policy of increasing the proportion of the school revenues which come from provincial sources and decreasing the proportion of revenues which come from local sources would achieve greater fiscal equalization among school jurisdictions in the province.

CONCLUDING COMMENT

A generally held belief is that equality of educational opportunity is desirable. The acceptance of this philosophy and the empirically supported assumption that there exists a positive relationship between fiscal equity and equality of educational opportunity, set the background for the study. The definition of fiscal equity and the determination of its achievement, however, is in some measure a subjective decision. Each finance plan developed for the attainment of fiscal equity reflects the political, economic, and social conditions existing at the time. Even if one could come up with a generally agreed-upon definition of fiscal equity and a plan to achieve it, there would still be problems. Three such problems are: (1) the possible incompatibility of efforts directed towards the attainment of a high degree of fiscal equity and efforts directed towards the attainment of a high degree of local autonomy, (2) a high degree of fiscal equity based on real property values, in the education sector, may be unrelated to total fiscal equity (i.e., educationally and municipally) unless account is taken of the total property tax burden resting on the ratepayer, and (3) a radical substitution of finance plans may create other hardships for some jurisdictions. Each of these problems is briefly addressed below.

First, as long as local autonomy is protected, the portion of revenue that reflects local option will by the nature of the differing fiscal abilities of localities create inequities. In other words, the government needs to recognize that the higher the percentage of school revenue provided from the local source, the greater the possibility, indeed the probability, for unequal financial resources and consequently unequal educational opportunity among school jurisdictions in the province or state. Following this line of reasoning, the achievement of "complete" fiscal equity could occur only where local jurisdictions were not permitted to supplement provincial or state appropriations with local property tax requisitions. However, if the principle "The piper payer calls the tune" holds in the governance of education this increase in central funding would be at the expense of the local jurisdiction's prerogative to make educational decisions. Hence, there would seem to be a trade-off between the ideals of complete fiscal equity and local autonomy such that the attainment of one is at the expense of the other.

Second, in the attainment of complete fiscal equity acknowledgement must be given to the fact that the property tax base which serves the demands of the education sector also serves the demands of local municipal government. Ideally, then, the equity principle should be implemented in a manner that would not seriously distort the allocation of financial resources among the whole group of local public services. In other words, before setting the property tax rate for education, the provincial (state) government must consider (a) the total taxpaying ability of local jurisdictions and (b) the total burden borne by the local property tax, not merely that portion which is directed for educational purposes.

Finally, the complete replacement of an existing plan with a new one which is designed to achieve greater fiscal equity may seem to solve the equity problem but in so doing may create other problems for school jurisdictions. Some jurisdictions, for example, may have financially committed themselves to certain undertakings under the presumption that no "major" changes in the provincial (state) allocation scheme would occur. Should the provincial (state) allocations for these jurisdictions suddenly decrease substantially, financial obligations already made may prove to be quite burdensome. The result would be a necessary increase in the tax burden borne by their ratepayers. Such unanticipated increases are not without perhaps serious local consequences.

For reasons such as the above, governments must move cautiously in making sudden changes to their school finance plans. Before a complete replacement of a government plan with such alternatives as power equalization or percentage equalization (the two alternatives tested in this study) is undertaken, the financial impact of each needs to be examined and the potential hardships on the school systems as a whole and on the local ratepayer in particular need to be determined. Nevertheless, it would seem that governments interested in improving the level of fiscal equity among local systems should consider implementing percentage equalization or power equalization, both of which were found in the present study to redistribute central funds more equitably without, apparently, decreasing the level of local autonomy enjoyed by individual school jurisdictions.

BIBILIOGRAPHY

BIBLIOGRAPHY

Alberta Education
1979 "Extra Funds for Small School Jurisdictions." News Release #4, February 9.

Alberta Municipal Affairs
1977 *Explaining Your Assessment*. Edmonton: Alberta Municipal Affairs.

Alford, A.L.
1963 *Nonproperty Taxation for Schools: Possibilities for Local Application*. Washington, D.C.: U.S. Department of Health, Education and Welfare.

Argue, K.F.
1942 "A Framework for Appraising the Financing of Education in the Canadian Provinces." A report submitted to the Canadian Council for Educational Research.

Atherton, P.J.
1968 "The Impact of Rising Price Levels on Expenditures for School Operation in Alberta, 1957 - 1965." Unpublished Doctoral Dissertation, University of Alberta.

1975 "Resource Allocation: New Process or New Structure." In W.J. Brown (ed.), *National Conference on Financing Education: The Challenge of Financing Equity*. Ottawa, Ontario: Canadian Teachers' Federation.

1979 "Trends in Canadian School Finance." Paper presented at the Annual Meeting of the American Education Finance Association, January 14-16.

Atkinson, A.
1970 "On the Measurement of Inequality." *Journal of Economic Theory*, 2:244-263.

Augenblick, J.
1979 *School Finance Reform in the States: 1979*. Report No. F79-4 Education Finance Center, Denver, Colorado.

Barkin, D.
1967 "The Equalizing Impact of State Aid to Education." Institute for Urban and Regional Studies, Washington University, St. Louis, Mo. (ERIC Document Reproduction No. ED 013 501).

Baron, G.
1981 Personal Communication, January.

Beck, J.H.
1979 "The Effects of Power Equalizing School Aid Formulas With an Income Factor." *Journal of Education Finance*, 5:55–74.

Benson, C.S.
1961 *The Economics of Public Education*. Boston: Houghton Mifflin.

1978 *The Economics of Public Education* (3rd ed.). Boston: Houghton Mifflin.

Benson, R.
n.d. "Equality of Education Opportunity and Equalization of the Mill Rate Burden -- Provincial Grants to School Boards for 1978."

Berke, J.S.
1974 *Answers to Inequity: An Analysis of the New School Finance*. Berkeley, California: McCutchan.

Berke, J.S., A.K. Campbell and R.J. Goettel
1972 *Financing Equal Educational Opportunity*. Berkeley, California: McCutchan.

Berke, J.S. and R.J. Goettel
1972 "Constraints to Meaningful Reform in School Finance." *Theory Into Practice*, 11:117–125.

1974 "The Role of Categorical Programs In the Post-Rodriguez Period." In J. Pincus (ed.), *School Finance in Transition: The Courts and Educational Reform*. Cambridge, Massachusetts: Ballinger.

Berne, R.
1978 "Alternative Equity and Equality Measures: Does the Measure Make a Difference?" In *Selected Papers in School Finance 1978*. Office of Education (DHEW), Washington, D.C. (ERIC Document Reproduction No. ED 165 237).

Berne, R. and L. Stiefel
1979a "Concepts of Equity and Their Relationship to State School Finance Plans." *Journal of Education Finance*, 5:109–132.

1979b "The Equity of School Finance System Over Time: The Value Judgments Inherent in Evaluation." *Educational Administration Quarterly*, 15:14–34.

1979c "Taxpayer Equity in School Finance Reform: The School Finance and the Public Finance Perspectives." *Journal of Education Finance*, 5:36–54.

Bezeau, L.M.
1977 "Equality of Educational Opportunity and Inequality of Per Pupil Expenditures." *The Alberta Journal of Educational Research*, 23:218–225.

Bezeau, L.M.
1979 "Measures of Inequality of Per Pupil Expenditure: Application to Ontario." *Journal of Education Finance*, 5:133-148.

Briley, W.P.
1971 "Variation Between School Districts Revenue and Financial Ability." In R.L. Johns, K. Alexander and D.H. Stollar (eds.), *Status and Impact of Educational Finance Programs* (vol. 4). Gainesville, Florida: National Educational Finance Project.

Brown, C.L.
1978 "The Adequate Program for Education in Georgia." *Journal of Education Finance*, 4:402-411.

Brown, W.J.
1980 "Education Finance in Canada" (Pre-Publication Edition). Ottawa, Ontario: Canadian Teachers' Federation.

Bumbarger, C.S. and E.W. Ratsoy
1975 *Financing Small Schools and Jurisdictions: An Analysis and Proposal for Alberta*. Department of Educational Administration, University of Alberta.

Burkhead, J.
1964 *Public School Finance: Economics and Politics*. New York: Syracuse University Press.

Canadian Teachers' Federation
1980 "Economic Service Bulletin."

1981 "Economic Service Bulletin."

Carroll, S.J.
1979 *The Search for Equity in School Finance: Results From Five States*. Santa Monica, California: Rand.

Cohen, M.A., B. Levin and R. Beaver
1973 *The Political Limits to School Finance Reform*. Washington, D.C.: Urban Institute.

Cohn, E.
1974 *Economics of State Aid to Education*. Lexington, Massachusetts: Heath.

Coons, J.E., W.H. Clune and S.D. Sugarman
1970 *Private Wealth and Public Education*. Cambridge, Massachusetts: Belknap.

Corbally, J.E.
1962 *School Finance*. Boston: Allyn and Bacon.

Deiseach, D.
1974 "Fiscal Equalization of School System Revenues Under the Alberta School Foundation Program 1961 – 1971." Unpublished Doctoral Dissertation, University of Alberta.

Dent, I.G.
1956 "The Evolution of School Grants in Alberta." Unpublished Masters Thesis, University of Alberta.

Department of Education
1975 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

1976 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

1977 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

1978 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

1979 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

1980 Financial and Statistical Report of Alberta School Boards. Edmonton: Government of Alberta

Doherty, V.W.
1961 "Principle of Equalization." *American School Board Journal*, 143:20–21.

Eckstein, O.
1979 *Public Finance*. Englewood Cliffs, New Jersey: Prentice–Hall.

Feldstein, M.S.
1975 "Wealth Neutrality and Local Choice in Public Education." *The American Economic Review*, 65:75–88.

Fowler, W.J. and R.E. Feir
1981 "The Effect of School Finance Reform in Pennsylvania 1976 – 80." A paper presented at the Annual Conference of the American Educational Research Association, Los Angeles, California.

Friedman, L.S. and M. Wiseman
1978 "Understanding the Equity Consequences of School–Finance Reform." *Harvard Educational Review*, 48:193–226.

Friedman, L.S. and M. Wiseman
1980 "Toward Understanding the Equity Consquences of School Finance Reform." In C.S. Benson, M. Kirst, S. Abramowitz, W. Hartman and L. Stoll (eds.), *Education Finance and Organization Research Perspectives for the Future: Program on Educational Policy and Organization*. Washington, D.C.: National Institute of Education, U.S. Department of Health, Education, and Welfare.

Furno, O.F.
1981 "State Equalization Plans Under Section 842." *Journal of Education Finance*, 6:357-386.

Garms, W.I.
1978 "Measuring the Equity of School Finance Systems." A study done for the National Institute of Education (DHEW), Washington, D.C. (ERIC Document Reproduction No. ED 175 160).

Garms, W.I., J.W. Guthrie and L.C. Pierce
1978 *School Finance: The Economics and Politics of Public Education*. New Jersey: Prentice-Hall.

Garvue, R.J.
1969 *Modern Public School Finance*. London, Ontario: Collier-MacMillian.

Gibson, J.T.
1976 "The Value of Equity, the High Cost of Neglect." *Kappa Delta Pi Record*, 13:55-58.

Gilmer, R.W.
1973 "Public Financing of Equal Educational Opportunity In a Fiscal Federalism." Unpublished Doctoral Dissertation, University of Texas at Austin.

Government of Alberta
1971 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1972 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1973 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1974 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1975 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1975 The Minister's Advisory Committee on School Finance. Edmonton, Alberta.

Government of Alberta
1976 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1977 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1978 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1979 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1980 Regulations Under the Department of Education Act, School Grants Regulations, Alberta Education Grants Order.

1980 Regulations Under the School Act; School Foundation Program Fund Regulations.

Government of Canada
1964 "A Consolidation of The British North America Acts 1867 to 1960." Department of Justice, Ottawa: Queen's Printer.

Government of Saskatchewan
1978 "Northern Saskatchewan Education Grants." August.

Governor's Commission of Public School Finance
1979 "Access to Equal Educational Opportunity in North Carolina." (ERIC Document Reproduction No. ED 170 439).

Graham, J.F.
1968 "The Fiscal Equity Principle." In A.J. Robinson and J. Cutt (eds.), *Public Finance in Canada: Selected Readings*. Toronto: Methuen.

Grant, I.D.
1976 "Financing New Brunswick's School Districts: 1976 – 1977." Unpublished paper, Department of Educational Administration, Unversity of Alberta.

Greene, K.V.
1979 "The Equalizing Effects of District Power Equalization: A Review of the Economics Literature." *Journal of Education Finance*, 5:187–214.

Grubb, W.W. and S. Michelson
1974 *States and Schools: The Political Economy of Public School Finance.* Lexington, Massachusetts: Heath.

Guess, A.
1978 "Financing Kentucky's Elementary and Secondary Education Program." *Journal of Education Finance*, 4:443-449.

Hanson, E.J.
1971 "The School Foundation Program in the 1960's." Research Monograph No. 17. Edmonton, Alberta: The Alberta Teachers' Association.

Harris, R.
1978 "Act 59 and the Prospects for Reforming School Finance in Pennsylvania." *Journal of Education Finance*, 4:487-501.

Harrison, R.S.
1976 *Equality in Public School Finance*. Lexington, Massachusetts: Heath.

Hettich, W., B. Lacombe and M. von Zur-Muehlen
1972 *Basic Goals and the Financing of Education*. CTF Project on Education Finance, Document 3. Ottawa, Ontario: Canadian Teachers' Federation.

Hickrod, G.A.
1971 "Local Demand for Education: A Critique of School Finance and Economic Research Circa 1959 - 1969." *Review of Educational Research*, 41:35-49.

1972 *Definition, Measurement and Application of the Concept of Equalization in School Finance*. Normal, Illinois: State Superintendent's Advisory Committee on School Finance.

1973 "Superintendent's Advisory Committee on School Finance. Final Report." (ERIC Document Reproduction No. ED 078 550).

1975 "Book Reviews." *Journal of Education Finance*, 1:146.

Hickrod, G.A., R. Chaudhari and B.C. Hubbard
1979 *Equity Goals in Illinois School Finance: 1973 - 1979*. Normal, Illinois: Center for the Study of Educational Finance, Illinois State University.

Hickrod, G.A., R.B. Chaudhari and V. Lundeen
1980 "Progress Toward School Finance Equity Goals in Indiana, Iowa, and Illinois." *Journal of Education Finance*, 6:176-200.

Hickrod G.A. and B.C. Hubbard
1978 "The 1973 School Finance Reform In Illinois: Quo Jure? Quo Vadis?" *Journal of Education Finance*, 4:412-431.

Hickrod, G.A., T. W.C. Yang, B.C. Hubbard and R. Chaudhari
1975 "Measurable Objectives for School Finance Reform: A Further Evaluation of the Illinois School Finance Reforms of 1973." A paper presented at the 1975 Annual Meeting of the American Educational Research Association, Washington, D.C., April. (ERIC Document Reproduction No. ED 103 977).

Hill, W.L. and B. Paige
1981 "Defining the Local Contribution to Local School Expenditures -- A Preliminary Report." In *Financing K-12 Schooling in Alberta -- Stage 1*. Edmonton: Government of Alberta.

Hirsch, W.Z.
1973 *Financing Public First-Level and Second-Level Education in the U.S.A.*, Paris: UNESCO.

Hudson, C.C.
1978 "An Overview of School Finance in Nebraska." *Journal of Education Finance*, 4:476-486.

Hyman, J.B.
1977 "Suggested Future Initiatives in Educational Finance." Rand Paper Series 5980. Santa Monica, California: Rand. (ERIC Document Reproduction No. ED 150 693).

James, H.T,
1961 "School Revenue Systems in Five States." (ERIC Document Reproduction No. ED 002 941).

1963 "Analysis of Wisconsin's School Support Program." In C.S. Benson (ed.), *Perspectives on the Economics of Education*. Boston: Houghton Mifflin.

Jargowsky, P., J. Moskowitz and J. Sinkin
1977 "School Finance Reform: Decoding the Simulation Maze." *Journal of Education Finance*, 3:199-213.

Jefferson, A.L.
1980a "Fiscal Equalization in Alberta." Unpublished paper, Department of Educational Administration, University of Alberta.

1980b *How Basic Education is Supported by the Government of Alberta*. An unpublished document written for Alberta Education, Finance, Statistics and Legislation Branch. Edmonton, Alberta: Department of Education.

1980c "How Should Education Be Financed in the 1980's?" Unpublished paper, Department of Educational Administration, University of Alberta.

Johns, R.L.
1973 *Full State Funding of Education: Evolution and Implications* . Pittsburgh: University of Pittsburgh Press.

1976 "Improving the Equity of School Finance Programs." *Journal of Education Finance*, 1:540-549.

Johns, R.L. and K. Alexander
1971a "Alternative Programs for Financing Education." National Educational Finance Report (Vol. 5), Gainsville, Florida. (ERIC Document Reproduction No. ED 059 525).

1971b *Future Directions for School Financing: A Response to Demands for Fiscal Equity in American Education.* Gainsville, Florida: National Educational Finance Project.

Johns, R.L., K. Alexander and F. Jordan
1972 *Financing Education: Fiscal and Legal Alternatives.* Columbus, Ohio: Merrill.

Johns, R.L. and E.L. Morphet
1975 *The Economics and Financing of Education: A Systems Approach* (3rd ed.). Englewood Cliffs, New Jersey: Prentice-Hall.

Johns, R.L. and R.G. Salmon
1971 "The Financial Equalization of Public School Support Programs in the United States for the School Year, 1968-69." In R.L. Johns et al. (eds.), *Status and Impact of Educational Finance Programs* (Vol. 4), Gainsville, Florida: National Educational Finance Project. (ERIC Document Reproduction No. ED 052 548).

Johns, T.L. and D.A. Magers
1978 "Measuring the Equity of State School Finance Programs." *Journal of Education Finance*, 4:373-385.

Johnston, J.
1972 *Econometric Methods* (2nd ed.). New York: McGraw-Hill.

Jones, H.R.
1966 *Financing Public Elementary and Secondary Education.* New York: The Center for Applied Research in Education.

Jones, R.L.
1978 "Re: Equity in Public School Financing." Occasional Paper No. 6. (ERIC Document Reproduction No. ED 162 401).

Jones, T.
1978 "The School Property Tax Reconsidered." *Educational Administration Quarterly*, 14:98-114.

Jordan, K.F.
1976 "The Weighted Pupil: An Opportunity for Program Flexibility and Improvement." *Journal of Education Finance*, 1:534-539.

Jordan, K.F. and M.P. McKeown
1980 "Equity in Financing Public Elementary and Secondary Schools." In J.W. Guthrie (ed.), *School Finance Policies and Practices The 1980's: A Decade of Conflict.* Cambridge, Massachusetts: Ballinger.

Kahl, W.
1963 "Wisconsin's State Support Program." In C.S. Benson (ed.), *Perspectives on the Economics of Education*. Boston: Houghton Mifflin.

Kelly, J.A.
1978 "The Public Policy Context of Education Finance." In J.A. Thomas and R.K. Wimpelberg (eds.), *Dilemmas in School Finance*, Chicago: Midwest Administration Center, University of Chicago.

Kelly, P.T.
1978 "South Carolina's New School Finance Law." *Journal of Education Finance*, 4:515-523.

Kirp, D.L.
1980 "Law, Politics, and Equal Educational Opportunity: The Limits of Judical Reform." In C.S. Benson, M. Kirst, S. Abramowitz, W. Hartman and L. Stoll (eds.), *Education Finance and Organization Research Perspectives for the Future: Program on Educational Policy and Organization*. Washington, D.C.: National Institute of Education, U.S. Department of Health, Education, and Welfare.

Krueger, J.
1975 "The Politics of School Finance: New Mexico Passes a State Funding Formula." *Journal of Education Finance*, 1:86-95.

Kulba, J.W.
1974 "Equity in Taxation and School Finance: A Relationship Between Property and Income Bases in Alberta Census Regions." Unpublished Doctoral Dissertation, University of Oregon.

Lawton, S.B.
1979 "Political Values in Educational Finance in Canada and the United States." *Journal of Education Finance*, 5:1-18.

Lees, D.S.
1963 "Percentage versus Unit Grants." In C.S. Benson (ed.), *Perspectives on the Economics of Education*. Boston: Houghton Mifflin.

Levin, B., T. Muller and W. Scanlon
1973 *School & Taxes in North Carolina*. Washington, D.C.: Urban Institute.

Lindman, E.L.
1975 "Foundation Programs and Percentage Grants." *Journal of Education Finance*, 1:270-273.

Listokin, D.
1974 *Educational Financing Reform: A Guide to Legislative Action*. Center for Urban Policy Research, Rutgers University, The State University of New Jersey.

Lovett, M.J. and V.D. Mueller
1978 "Equity and Equalization in Minnesota School Finance." *Journal of Education Finance*, 4:450–464.

Mann, L.L.
1980 "School Finance Reform in Connecticut." *Phi Delta Kappan*, 62:250–251.

Matthews, K.M.
1978 "A Study of the Impact of Resource Cost Variations on Equality of Educational Opportunity in Georgia." Georgia State Board Education, Atlanta. (ERIC Document Reproduction No. ED 159 785).

Meek, J.C.
1979 "Local School Board Revenues and Expenditures in a Period of Declining Enrolments." Unpublished Doctoral Dissertation, University of Alberta.

Menz, F.C. and A.H. Raphaelson
1976 "Some Issues in Equalizing Educational Spending." *Journal of Education Finance*, 2:99–109.

Miner, J.
1963 *Social and Economic Factors in Spending for Public Education*. New York: Syracuse University Press.

Mockler, J.B. and G. Hayward
1978 "School Finance In California: Pre-Serrano to the Present." *Journal of Education Finance*, 3:386–401.

Moffatt, H.P.
1957 *Educational Finance in Canada*. Toronto: Gage.

Moore, D.O.
1971 "Local Nonproperty Taxes for Schools." In R.L. Johns, K. Alexander and D.H. Stollar (eds.), *Status and Impact of Educational Finance Programs* (Vol. 4). Gainesville, Florida: National Educational Finance Project.

Mort, P.R., W.C. Reusser, and J.W. Polley
1960 *Public School Finance -- Its Background, Structure and Operations*. New York: McGraw-Hill.

New York State Commission
1973 *The Fleischmann Report: On the Quality, Cost, and Financing of Elementary and Secondary Education in New York State* (Vol. 1). New York: Viking.

Nie, N.H., C.H. Hull, J.G. Jenkins, K. Steinbrenner and D.H. Bent
1975 *Statistical Package for the Social Sciences* (2nd ed.). New York: McGraw-Hill.

Norton, J.K.
1966 *Dimensions in School Finance*. National Education Association Committee on Educational Finance.

Norton, J.K. and M.A. Norton
1938 *Wealth, Children and Education* (2nd ed.). Bureau of Publications, Teachers College, Columbia University, New York.

Odden, A.
n.d. "Public Policy Issues in School Finance Reform."

1977 "Alternative Measures of School District Wealth." *Journal of Education Finance*, 2:356-379.

1978 "Missouri's New School Finance Structure." *Journal of Education Finance*, 4:465-475.

Odden, A. and J. Augenblick
1980 *School Finance Reform in the States: 1980*. Denver, Colorado: Education Finance Center, Education Commission of the States.

Ornstein, A.C.
1978 "Educational Financing and Government Spending." *Theory Into Practice*, 17:341-347.

Osburn, D.D. and K. Schieder
1981 "An Analysis of a School Finance Formula with Respect to Fiscal Equity." A paper presented at the Annual Conference of the American Educational Research Association, Los Angeles, California.

Peat, Marwick and Partners
1981a "Educational Price Index." A study commissioned by the Alberta Department of Education.

1981b "Disaggregating and Revising the Alberta Education Price Index." In *Financing K-12 Schooling is Alberta -- Stage 1*. Edmonton: Government of Alberta.

Phelps, J.L. and T.C. Jones
1972 "A Proposal for State Aid and Distribution." *Theory Into Practice*, 11:102-107.

Pierce, L.C., W.I. Garms, J.W. Guthrie and M.W. Kirst
1975 *State School Finance Alternatives: Strategies for Reform*. Eugene, Oregon: Center for Edcational Policy and Management, University of Oregon.

Pike, H.A.
1971 "The Effects of the 1970 School Foundation Program on the Operation of Alberta School Systems." Unpublished Masters Thesis, University of Alberta.

Pincus, J.
1974 *School Finance in Transition: The Courts and Educational Reform.* Cambridge, Mass.: Ballinger.

Provincial-Municipal Finance Council
1979 *The Responsibilities and Financing of Local Government in Alberta.* A report prepared by the Provincial-Municipal Finance Council, Edmonton.

Ratsoy, E., R. Bryce, C. Bumbarger, A. MacKay, E. Miklos, M. Nixon, D. Richards and E. Seger
1981 *Situation Reviews on Financing Schooling in Alberta* . Department of Educational Administration, University of Alberta.

Rideout, E.B.
1980 "Some Problems and Prospects for Education Finance in Canada in the Eighties." Address to the CTF Conference on Education Finance, Montreal.

Rossmiller, R.A.
1979 "Financing Urban Schools." A paper presented at the Conference for Urban Educators. (ERIC Document Reproduction No. ED 185 219).

Rossmiller, R.A. and T.H. Moran
1973 "Programmatic Cost Differentials in Delaware School Districts." A study conducted for the Delaware State Board of Education. (ERIC Document Reproduction No. ED 083 712).

Scheuer, J.
1979 "Levittown v. Nyquist: A Dual Challenge." *Phi Delta Kappan,* February:432-436.

Sexton, P.C.
1963 "Toward Financial Equality for Schools of Rich and Poor Pupils." In C.S. Benson (ed.), *Perspectives on the Economics of Education.* Boston: Houghton Mifflin.

Shalala, D.E.
1972 "School Finance in New York State: History, Theory, and Experience," In J.S. Berke, A.K. Campbell and R.J. Goettel (eds.), *Financing Equal Educational Opportunity: Alternatives for State Finance.* Berkley, California: McCutchan.

Sherman, J.D.
1981 "Equity in School Finance: A Cross-National Perspective." *Educational Evaluation and Policy Analysis,* 3:5-21.

Shultz, W.J. and C.L. Harriss
1959 *American Public Finance.* Englewood Cliffs, New Jersey: Prentice-Hall.

Singer, N.M.
1976 *Public Microeconomics: An Introduction to Government Finance* (2nd ed.). Boston: Little, Brown and Company.

Stultz, J.R.
1976 "The Incidence of Educational Needs and the Cost of Meeting These Needs in the United States in 1980." *Journal of Education Finance*, 1:361-372.

Tanner, C.K., D.H. Stollar and W.E. Tomlinson
1974 "A Resource Allocation Design for State and Local Educational Systems." *Planning and Changing*, 4:157-166.

U.S. Department of Health, Education and Welfare
1971 "Future Directions ofr School Financing: A Response to Demands for Fiscal Equity in American Education." Gainesville, Florida. (ERIC Document Reproduction No. ED 059 526).

Wahlstrom, E.G.
1976 *A Study: Isolation Bonus and Teacher Housing*. Project North, Findings and Recommendations. A report submitted to the Planning and Research Branch, Alberta Education, May.

Ward, C.V.L.
1978 "State Support for Rhode Island Public School Operations: An Explanation and Critique." *Journal of Education Finance*, 4:502-514.

Wentzler, N.
1981 "Adjusting for Input Price Differences Across School Districts: A Comparison of Alternative Techniques." *Journal of Education Finance*, 6:310-329.

Wilensky, G.R.
1970 *State Aid and Educational Opportunity*. Beverly Hills, California: Sage.

Wise, A.E.
1968 *Rich Schools Poor Schools: The Promise of Equal Educational Opportunity*. Chicago: University of Chicago Press.

Wynkoop, R.J.
1974 "Prognosis for Change in State Finance Plans: An Analysis of Recent Commission Reports and Court Decisions." *Educational Administration Quarterly*, 10:20-32.

Van Fleet, D.S. and G. Boardman
1971 "The Relationship Between Revenue Allocations and Educational Need as Reflected by Achievement Test Scores." In R.L. Johns (ed.), *Status and Impact of Educational Finance Programs* (Vol. 4), National Educational Finance Project. Gainesville, Florida.

APPENDICES

APPENDIX A

LISTING OF ALBERTA SCHOOL JURISDICTIONS

TABLE A.1

LISTING OF ALBERTA SCHOOL JURISDICTIONS

Types of Jurisdictions	Name and Number		
Divisions	1 Berry Creek	2 Cardston	4 Medicine Hat
	6 Taber	8 Acadia	9 Rangeland
	10 Peace River	12 Yellowhead	15 Rocky Mountain
	16 Neutral Hills	24 Sturgeon	28 Willow Creek
	29 Pincher Creek	30 Starland	32 Wainwright
	33 Provost	37 Westlock	38 Foothills
	41 Rocky View	46 Bonnyville	47 Spirit River
	48 High Prairie	50 Fairview	51 Lac La Biche
	52 Fort Vermilion	54 East Smoky	60 Three Hills
	61 Northland	62 Drumheller	63 Crowsnest Pass
Counties	1 Grande Prairie	2 Vulcan	3 Ponoka
	4 Newell	5 Warner	6 Stettler
	7 Thorhild	8 Forty Mile	9 Beaver
	10 Wetaskiwin	11 Barrhead	12 Athabasca
	13 Smoky Lake	14 Lacombe	16 Wheatland
	17 Mountain View	18 Paintearth	19 St. Paul
	20 Strathcona	21 Two Hills	22 Camrose
	23 Red Deer	24 Vermilion River	25 Leduc
	26 Lethbridge	27 Minburn	28 Lac Ste. Anne
	29 Flagstaff	30 Lamont	31 Parkland

TABLE A.1 (continued)

Types of Jurisdictions	Name and Number		
Public School Districts	3 St. Albert	7 Edmonton	19 Calgary
	51 Lethbridge	76 Medicine Hat	102 Banff
	104 Red Deer	168 Canmore	172 Morley
	264 Wetaskiwin	647 Stirling	1063 Lake Louise
	1315 Camrose	1475 Stettler	1699 Exshaw
	1738 Legal	1753 Lloydminster	1892 Rosenheim
	2083 Western Ridge	2094 Hokenheim	2092 Brooks
	2228 St. Paul	2283 Redcliff	2357 Grande Prairie
	2665 Bonnyville	2833 Fort McMurray	3063 Jasper
	3705 Portsmouth	4152 Seebe	4233 Waterton Park
	4910 Grovedale	4972 Devon	4981 Ralston
	4986 Canadian Forces Base	5012 Mynarski Park	5029 Medley
	5047 Buffalo Park	5054 St. Isidore	5098 Keystone Valley
	5109 Swan Hills	5198 Harvie Heights	5258 Grande Cache
Roman Catholic Separate School Districts	1 Calgary	7 Edmonton	9 Lethbridge
	15 Wetaskiwin	16 Vegreville	17 Red Deer
	18 Pincher Creek	21 Medicine Hat	23 Theresetta
	25 Drumheller	26 Fort Vermilion	27 St. Rita's
	28 Grande Prairie	30 McLennan	31 Wainwright
	32 Fort McMurray	35 St. Thomas More	36 Spirit River
	37 Rosary	42 Mazenod	43 Peace River
	46 Crossroads	49 Killam	50 Assumption
	51 Sexsmith	54 Taber	56 High Prairie
	60 Camrose	64 Cold Lake	65 Provost
	67 Grand Centre	68 Beaverlodge	70 Hayter
	71 Luxemburg	73 Coaldale	79 Picture Butte

TABLE A.1 (continued)

Types of Jurisdictions	Name and Number		
Roman Catholic Separate School Districts (cont'd)	82 Bow Island	83 Burdett	84 Valleyview
	86 Strand	88 Grimshaw	89 Berwyn
	94 Whitecourt	95 Ponoka	96 Nampa
	97 Vermilion	100 Raymond	101 Gartley
	102 White Rose	103 Morning Glory	104 Fort Saskatchewan
	105 Sherwood Park	108 Rosedale	110 Westlock
	111 Drayton Valley	118 Rio Grande	120 Tomahawk
	122 Aubindale	124 Bevin	125 Willow Trail
	128 Spruce Grove	131 Rocky Mountain House	132 Leduc
	134 Uncas	135 Bluesky	136 St. Claire
	137 Green Island	138 Beaver Ridge	140 Gage
	141 Waterhole	143 Notre Dame	144 Saskatchewan
	145 Wimbledon	1111 Lloydminster	
Consolidated School Districts	8 Barons	38 Lousana	69 Falher
Roman Catholic Public School Districts	35 Thibault		

TABLE A.1 (continued)

Types of Jurisdictions	Name and Number		
Protestant Separate School Districts	5 Glen Avon	6 St. Albert	7 Smithreade
Regional School Districts	1 St. Paul	4 Bonnyville	5 Bow Corridor

APPENDIX B

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980

APPENDIX B

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980

The following tables presents the actual amount of tax relief in mills that each school jurisdiction received from the province for the years 1975 through 1980. The allocated level of tax relief has been grouped by increments of five mills with each group displayed in a separate table. The groups were: (1) zero mills, (2) .01 - 5.00 mills, (3) 5.01 - 10.00 mills, (4) 10.01 - 15.00 mills, (5) 15.01 - 20.00 mills, (6) 20.01 - 25.00 mills, (7) 25.01 - 30.00 mills, (8) 30.01 - 35.00 mills, (9) 35.01 - 40.00 mills, and (10) 40.01 or more mills.

TABLE B.1

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR
THE YEARS 1975 TO 1980
(ZERO MILLS)

1975	1976	1977	1978	1979	1980
DIST172	CTY7	DIST102	DIST172	DIST1063	DIST1063
DIST1892	DIST172	DIST1699	DIST1892	DIST172	DIST172
DIST2083	DIST1892	DIST172	DIST19	DIST1892	DIST2083
DIST2094	DIST19	DIST1892	DIST2083	DIST2083	DIST2094
DIST2833	DIST2083	DIST19	DIST2094	DIST2094	DIST3705
DIST3063	DIST2094	DIST2083	DIST5198	DIST5198	DIST5198
DIST4972	DIST3063	DIST2094	DIST5098	DIST5098	DIST5098
DIST5198	DIST5198	DIST4152	PS7	PS7	RC101
DIST5098	DIST5258	DIST5198	RC101	RC101	RC102
PS7	DIST5098	DIST5098	RC102	RC102	RC103
RC101	DIST7	PS7	RC103	RC103	RC124
RC102	PS7	RC101	RC122	RC122	RC125
RC103	RC101	RC102	RC27	RC124	RC135
RC120	RC102	RC120	RC70	RC131	RC136
RC122	RC103	RC125	RC71	RC27	RC137
RC125	RC108	RC128	RC86	RC70	RC138

TABLE B.1 (continued)

1975	1976	1977	1978	1979	1980
RC70	RC122	RC27		RC71	RC140
RC71	RC125	RC71		RC86	RC141
RC86	RC70	RC86			RC71
	RC71				RC86
	RC86				

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.2

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980 (0.01 - 5.00 MILLS)

1975		1976		1977		1978		1979		1980	
CTY16	0.90	CON8	3.49	CTY1	4.02	CTY16	2.31	CTY16	1.92	CTY14	3.43
CTY17	2.39	CTY1	3.46	CTY16	1.96	CTY17	2.55	CTY17	3.62	CTY16	1.81
CTY18	0.63	CTY16	0.80	CTY17	1.34	CTY18	2.03	CTY18	2.40	CTY17	2.99
CTY2	1.76	CTY17	1.30	CTY18	1.47	CTY2	2.29	CTY2	4.19	CTY18	3.20
CTY20	3.53	CTY18	2.02	CTY2	1.59	CTY20	0.00	CTY20	0.09	CTY2	3.42
CTY24	4.36	CTY2	1.16	CTY20	0.62	CTY25	3.88	CTY25	3.46	CTY20	0.75
CTY25	4.23	CTY20	0.56	CTY25	4.27	CTY31	1.82	CTY27	4.08	CTY23	3.21
CTY31	2.17	CTY21	4.20	CTY27	4.71	CTY8	4.68	CTY31	1.18	CTY25	1.91
CTY4	3.16	CTY24	4.43	CTY29	3.58	DIST102	0.34	DIST102	1.55	CTY27	2.73
CTY6	1.19	CTY25	4.45	CTY31	1.30	DIST104	3.16	DIST104	2.12	CTY28	3.21
CTY7	0.26	CTY27	3.85	CTY4	2.08	DIST1315	1.58	DIST1315	1.15	CTY31	0.67
CTY8	2.18	CTY29	3.25	CTY6	2.74	DIST168	0.39	DIST168	1.05	CTY4	3.81
DIST102	0.65	CTY31	2.15	CTY7	4.92	DIST1699	4.32	DIST1699	3.83	CTY8	4.58
DIST104	4.18	CTY4	1.64	CTY8	2.62	DIST2357	3.41	DIST19	0.01	DIST102	2.00
DIST1315	1.08	CTY6	1.05	CTY9	4.91	DIST264	2.68	DIST2092	4.26	DIST104	1.61
DIST168	3.87	CTY8	1.39	DIST104	3.53	DIST2833	4.40	DIST2357	3.92	DIST1315	1.38

TABLE B.2 (continued)

1975		1976		1977		1978		1979		1980	
DIST1699	4.99	CTY9	4.57	DIST1315	2.87	DIST3063	0.93	DIST264	2.52	DIST168	0.43
DIST19	0.51	DIST102	0.18	DIST168	2.02	DIST4233	4.66	DIST2833	1.89	DIST1699	2.44
DIST2357	4.99	DIST104	3.81	DIST1753	3.14	DIST4972	4.12	DIST3063	2.10	DIST19	0.41
DIST264	3.63	DIST1315	2.23	DIST2357	3.61	DIST51	0.52	DIST51	0.32	DIST264	2.17
DIST4152	3.94	DIST168	2.79	DIST264	1.66	DIST5109	1.19	DIST5109	2.30	DIST2665	0.57
DIST4233	2.50	DIST1699	0.15	DIST3063	0.17	DIST5258	0.18	DIST5258	4.77	DIST2833	3.73
DIST51	3.16	DIST2357	4.34	DIST4233	4.22	DIST7	0.41	DIST7	0.21	DIST3063	1.97
DIST5109	2.64	DIST264	2.93	DIST4972	4.22	DIST76	2.32	DIST76	1.77	DIST4152	2.91
DIST5258	0.40	DIST4152	2.42	DIST51	0.79	DIV15	0.18	DIV15	0.41	DIST4233	4.44
DIST7	0.21	DIST4233	1.91	DIST5109	1.73	DIV16	4.31	DIV24	2.33	DIST51	0.18
DIST76	2.80	DIST51	2.63	DIST5258	0.67	DIV24	4.57	DIV29	3.57	DIST5109	2.41
DIV1	3.13	DIST5109	2.74	DIST7	0.04	DIV29	3.43	DIV38	2.46	DIST5258	3.05
DIV15	0.78	DIST76	3.14	DIST76	3.10	DIV38	2.58	DIV4	2.69	DIST7	0.62
DIV16	1.34	DIV1	3.96	DIV1	4.86	DIV4	2.28	DIV41	0.19	DIST76	1.47
DIV28	4.33	DIV15	0.11	DIV15	0.16	DIV41	0.43	DIV54	1.78	DIV1	4.81
DIV29	2.45	DIV16	1.17	DIV16	2.92	DIV54	3.53	DIV60	4.20	DIV12	4.90
DIV30	1.20	DIV28	4.38	DIV29	0.68	DIV8	3.88	DIV9	3.94	DIV15	0.50

TABLE B.2 (continued)

1975		1976		1977		1978		1979		1980	
DIV33	2.29	DIV29	0.76	DIV30	1.77	DIV9	2.15	RC1	3.61	DIV24	1.28
DIV38	3.67	DIV30	0.56	DIV33	3.28	RC1	3.94	RC104	4.40	DIV29	1.45
DIV4	1.12	DIV32	4.92	DIV38	2.42	RC104	3.79	RC128	1.64	DIV38	1.67
DIV41	2.05	DIV33	1.32	DIV4	1.65	RC128	2.01	RC16	4.03	DIV4	2.30
DIV54	0.66	DIV38	2.31	DIV41	0.26	RC7	1.27	RC7	0.88	DIV41	0.01
DIV60	0.85	DIV4	1.09	DIV54	2.22	RC9	0.80	RC9	0.93	DIV54	1.48
DIV62	3.39	DIV41	0.13	DIV60	3.82					DIV60	1.97
DIV8	2.18	DIV54	0.82	DIV8	1.99					DIV62	2.91
RC16	2.78	DIV60	0.60	DIV9	3.03					DIV8	3.88
RC32	3.49	DIV62	1.92	RC103	3.54					DIV9	2.17
RC7	1.10	DIV8	0.97	RC7	1.65					RC1	3.32
RC9	4.01	DIV9	3.74	RC79	2.88					RC128	2.52
		RC120	3.50	RC9	1.20					RC132	0.93
		RC16	1.01							RC143	1.13
		RC7	1.49							RC16	3.06
		RC79	4.24							RC17	4.98
		RC9	3.19							RC27	4.76

TABLE B.2 (continued)

1975		1976		1977		1978		1979		1980	
										RC32	3.66
										RC64	3.62
										RC67	1.93
										RC7	0.48
										RC70	0.33
										RC9	1.02

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.3

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980
(5.01 - 10.00 MILLS)

1975		1976		1977		1978		1979		1980	
CON38	9.52	CTY10	6.98	CTY10	6.99	CP35	8.15	CON8	8.34	CON8	6.42
CON8	6.05	CTY13	9.41	CTY14	6.88	CTY1	6.61	CP35	7.08	CP35	6.65
CTY1	8.35	CTY14	5.14	CTY21	5.85	CTY10	8.92	CTY1	8.58	CTY1	8.96
CTY10	7.80	CTY22	5.65	CTY22	7.08	CTY14	7.65	CTY10	9.32	CTY10	6.86
CTY14	5.02	CTY23	5.46	CTY23	6.04	CTY21	8.70	CTY14	6.99	CTY12	9.27
CTY21	5.77	CTY26	8.83	CTY24	5.54	CTY23	5.75	CTY23	5.35	CTY13	9.68
CTY22	6.41	CTY28	5.01	CTY28	5.42	CTY24	8.43	CTY24	9.01	CTY21	9.27
CTY23	6.34	CTY3	9.35	CTY30	6.98	CTY27	5.44	CTY28	5.08	CTY22	9.90
CTY26	9.24	CTY30	6.25	CTY5	7.97	CTY28	5.60	CTY29	8.07	CTY24	7.95
CTY27	5.66	CTY5	6.43	DIST1475	6.99	CTY29	7.62	CTY30	7.14	CTY29	5.75
CTY28	5.05	DIST1475	5.83	DIST1738	9.34	CTY30	7.74	CTY4	5.26	CTY3	8.24
CTY29	5.08	DIST1738	9.13	DIST2092	5.84	CTY4	5.01	CTY6	9.26	CTY30	5.15
CTY30	6.41	DIST2092	6.92	DIST2283	9.46	CTY6	7.83	CTY8	5.02	CTY6	5.12
CTY5	7.22	DIST2283	8.83	DIST2665	8.77	CTY9	5.71	CTY9	6.79	CTY9	5.19
CTY9	7.11	DIST2833	6.33	DIST2833	5.37	DIST1475	6.35	DIST1475	6.61	DIST1475	5.73
DIST1475	5.98	DIST4910	7.99	DIST3	8.45	DIST2092	5.07	DIST2665	9.25	DIST1892	6.13

TABLE B.3 (continued)

1975		1976		1977		1978		1979		1980	
DIST2092	6.95	DIST4972	7.09	DIV10	9.33	DIST2283	9.53	DIST3	6.02	DIST2092	5.47
DIST2283	5.72	DIV10	7.81	DIV12	6.73	DIST2665	7.07	DIST3705	9.82	DIST2228	9.76
DIST2665	8.80	DIV12	8.40	DIV24	7.35	DIST3	9.71	DIST4152	6.50	DIST2357	5.09
DIV10	8.96	DIV2	8.48	DIV28	5.19	DIST4152	8.35	DIST4233	6.56	DIST3	7.66
DIV12	7.25	DIV24	6.75	DIV32	5.13	DIV1	6.17	DIST4972	5.83	DIST4972	6.39
DIV2	7.09	DIV6	8.57	DIV6	9.81	DIV12	6.15	DIV1	7.35	DIV16	5.12
DIV24	8.03	PS5	7.31	DIV62	5.26	DIV28	5.19	DIV12	7.36	DIV28	5.32
DIV32	7.37	RC1	6.57	PS5	6.98	DIV30	5.29	DIV16	8.44	DIV30	7.55
DIV6	9.23	RC104	7.89	PS6	9.47	DIV32	7.26	DIV28	6.24	DIV32	5.23
DIV9	8.13	RC32	8.86	RC1	5.72	DIV33	5.89	DIV30	5.81	DIV33	6.63
PS6	9.80			RC104	6.95	DIV60	8.55	DIV32	6.98	DIV63	9.63
RC1	6.28			RC108	6.85	DIV62	6.33	DIV33	7.15	PS5	8.41
RC104	7.91			RC16	5.41	PS5	6.05	DIV62	6.24	PS6	8.25
RC25	6.97			RC32	9.66	PS6	7.19	DIV8	6.16	PS7	6.21
RC54	9.90					RC16	5.02	PS5	8.80	RC104	5.38
RC56	7.93					RC21	8.93	PS6	6.49	RC110	9.68
RC60	9.21					RC28	9.34	RC120	6.24	RC122	7.65

TABLE B.3 (continued)

1975		1976		1977		1978		1979		1980	
RC79	9.26							RC17	7.75	RC21	6.44
RC94	7.05							RC21	7.16		
								RC32	7.83		

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.4

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980
(10.01 - 15.00 MILLS)

1975		1976		1977		1978		1979		1980	
CP35	14.53	CON38	11.65	CON38	13.15	CON38	13.19	CTY12	14.23	CON38	14.22
CTY13	10.86	CON69	13.17	CON69	12.78	CTY12	14.33	CTY13	12.51	CTY11	14.94
CTY3	10.17	CP35	12.01	CP35	11.99	CTY13	12.13	CTY21	12.07	CTY26	12.20
DIST1738	11.16	CTY11	14.37	CTY12	14.97	CTY22	12.34	CTY22	12.60	CTY5	10.63
DIST2228	12.11	CTY12	14.22	CTY13	11.31	CTY26	13.38	CTY26	14.09	CTY7	13.32
DIST3	10.30	DIST2228	11.83	CTY26	11.01	CTY3	12.12	CTY3	10.96	DIST1738	14.89
DIST647	11.94	DIST2665	11.06	CTY3	11.04	CTY5	11.19	CTY5	12.37	DIST2283	11.52
DIV37	11.02	DIST3	10.60	DIST2228	11.11	DIST1738	10.44	DIST1738	10.60	DIV10	10.30
DIV47	14.16	DIV37	10.55	DIV2	11.49	DIST2228	11.80	DIST2228	11.17	DIV2	13.48
DIV48	12.38	DIV47	12.45	DIV37	12.50	DIV10	12.90	DIST2283	11.30	DIV37	11.84
DIV50	11.87	DIV48	11.93	DIV47	14.09	DIV2	14.09	DIV10	14.27	DIV46	14.75
PS5	10.04	DIV50	11.01	DIV48	13.71	DIV37	14.10	DIV37	14.32	DIV48	14.55
RC110	10.87	PS6	11.06	DIV50	13.98	DIV6	12.24	DIV6	14.18	DIV6	11.92
RC17	12.51	RC110	14.06	RC110	14.40	DIV63	14.04	DIV63	13.78	RC100	11.14
RC21	13.66	RC17	11.55	RC21	10.27	RC110	14.49	RC105	13.92	RC108	11.87
RC23	14.66	RC21	11.29	RC28	10.16	RC120	10.62	RC110	14.35	RC131	14.53

TABLE B.4 (continued)

1975		1976		1977		1978		1979		1980	
RC27	14.24	RC25	11.32	RC37	10.90	RC17	12.05	RC28	12.22	RC25	13.83
RC28	11.68	RC27	14.03	RC43	13.89	RC32	13.73	RC54	12.76	RC28	13.39
RC37	13.06	RC28	10.99	RC54	13.23	RC37	13.99			RC54	12.24
RC65	13.60	RC37	13.24	RC65	14.37	RC54	11.40			RC94	14.92
		RC43	14.45								
		RC54	11.25								
		RC65	13.32								
		RC94	13.26								

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT;
CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.5

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980
(15.01 - 20.00 MILLS)

1975		1976		1977		1978		1979		1980	
CON69	16.72	CTY19	19.61	CTY11	15.74	CTY11	18.34	CON38	17.65	CON69	18.49
CTY11	15.11	DIST647	18.27	DIST5054	17.09	DIV48	18.86	CTY11	17.46	DIST5054	19.89
CTY12	16.86	DIV63	15.24	DIST647	18.61	DIV50	15.69	CTY7	16.05	DIV47	16.48
DIV63	15.76	RC100	17.49	DIV63	15.02	RC105	16.40	DIV2	15.87	DIV50	15.02
RC100	17.26	RC105	19.07	RC105	17.96	RC108	15.69	DIV48	16.43	RC105	17.58
RC18	17.06	RC18	18.28	RC1111	16.05	RC25	18.45	DIV50	17.49	RC31	15.04
RC26	16.63	RC35	15.22	RC17	16.60	RC31	17.28	RC100	16.00	RC60	18.33
RC35	15.54	RC56	19.21	RC25	15.07	RC35	19.13	RC125	16.58	RC79	17.89
RC43	15.11	RC67	15.24	RC31	19.34	RC43	17.29	RC31	18.98	RC95	18.65
RC51	19.12	RC82	17.28	RC35	19.55	RC65	18.31			RC97	19.99
		RC84	17.26	RC82	17.60	RC79	17.97				
		RC97	18.56	RC94	15.64	RC94	19.15				

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.6

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980 (20.01 - 25.00 MILLS)

1975		1976		1977		1978		1979		1980	
CTY19	23.48	DIV46	22.79	CTY19	21.82	DIST647	23.87	CON69	24.99	CTY19	24.70
DIST3705	20.28	RC15	21.14	DIV46	22.83	DIV46	24.31	DIST647	24.44	RC120	24.47
DIV46	24.16	RC23	21.25	RC18	20.98	DIV47	24.81	DIV46	21.99	RC15	21.48
RC31	21.75	RC51	21.84	RC56	21.25	RC100	20.08	DIV47	24.09	RC18	24.72
RC67	20.36	RC60	20.00	RC60	23.84	RC60	20.30	RC25	23.67	RC43	20.42
RC84	23.77			RC67	23.74	RC95	21.10	RC35	24.41	RC65	23.60
RC95	24.31			RC88	24.58	RC97	22.99	RC37	23.85		
				RC95	20.78			RC43	24.16		
				RC97	23.99			RC79	21.74		
								RC95	24.60		

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.7

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR
THE YEARS 1975 TO 1980
(25.01 - 30.00 MILLS)

1975		1976		1977		1978		1979		1980	
RC105	26.87	RC30	25.02	RC100	25.88	CON69	27.08	CTY19	27.82	DIST647	25.47
RC15	28.48	RC31	25.40			CTY19	26.42	RC60	26.96		
RC30	25.30	RC36	25.51			DIST3705	28.85	RC65	25.59		
RC42	26.60	RC89	28.18			RC18	28.78	RC67	29.04		
RC64	26.85					RC56	25.28	RC73	29.64		
RC73	27.58					RC67	25.89	RC84	29.89		
RC82	26.79					RC73	27.91	RC94	26.89		
RC97	26.97							RC97	29.90		

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT;
CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.8

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR THE YEARS 1975 TO 1980
(30.01 - 35.00 MILLS)

1975		1976		1977		1978		1979		1980	
RC36	34.30	RC42	32.79	RC15	33.88	RC111	33.63	DIST5054	30.51	RC111	34.01
RC49	30.31	RC73	30.73	RC30	34.21	RC125	32.27	RC108	31.90	RC35	34.16
RC88	34.40	RC88	31.48	RC42	33.53	RC15	30.59	RC111	31.34	RC37	34.39
				RC49	34.63	RC82	32.86	RC83	32.50	RC49	32.79
				RC51	30.61	RC84	31.47	RC88	34.70	RC73	33.45
				RC64	34.62	RC88	30.07			RC82	31.50
				RC73	34.47					RC83	31.11
				RC84	34.54						

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.9

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR
THE YEARS 1975 TO 1980
(35.01 - 40.00 MILLS)

1975		1976		1977		1978		1979		1980	
RC50	38.14	DIST5054	39.76	RC23	37.01	RC49	37.91	RC51	35.33	DIV51	37.49
		RC49	35.43	RC89	38.57	RC64	37.50	RC82	39.10	RC56	36.27
		RC64	36.21			RC83	37.13				
		RC95	36.39								

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT;
CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

TABLE B.10

PROVINCIAL AID (IN MILLS) ALLOCATED TO SCHOOL JURISDICTIONS FOR
THE YEARS 1975 TO 1980
(40.01 OR MORE MILLS)

1975		1976		1977		1978		1979		1980	
DIST4910	70.05	DIST3705	40.07	DIST3705	47.73	CON8	761.65	DIST4910	75.22	DIST4910	60.64
DIST5054	42.93	DIV51	45.27	DIST4910	146.52	CTY7	46.52	DIV51	46.60	DIV52	63.55
DIV51	42.06	DIV52	83.27	DIV51	46.02	DIST4910	106.52	DIV52	119.46	DIV61	45.14
DIV52	59.43	DIV61	507.54	DIV52	93.54	DIST5054	43.79	DIV61	85.67	RC118	113.02
DIV61	831.78	RC111	48.04	DIV61	73.65	DIV51	47.87	RC118	135.92	RC23	66.96
RC111	50.83	RC118	77.57	RC111	66.73	DIV52	106.30	RC15	41.61	RC26	226.52
RC118	84.96	RC26	96.86	RC118	51.78	DIV61	96.84	RC18	41.61	RC30	66.20
RC46	66.57	RC46	53.21	RC26	115.19	RC118	84.66	RC23	71.61	RC36	59.90
RC68	55.89	RC50	52.57	RC36	49.34	RC23	89.20	RC26	158.37	RC42	73.29
RC83	41.38	RC68	83.61	RC46	51.48	RC26	122.85	RC30	100.26	RC46	42.76
RC89	95.22	RC83	42.38	RC50	56.21	RC30	63.36	RC36	60.27	RC50	58.79
RC96	54.19	RC96	76.66	RC68	106.05	RC36	60.47	RC42	69.61	RC51	42.62
				RC83	40.61	RC42	62.44	RC46	72.25	RC68	61.45
				RC96	45.74	RC46	57.55	RC49	43.91	RC84	41.92
						RC50	56.11	RC50	61.22	RC88	45.95
						RC51	49.93	RC56	43.87	RC89	120.66

TABLE B.10 (continued)

1975		1976		1977		1978		1979		1980	
						RC68	117.83	RC64	47.82	RC96	49.46
						RC89	46.82	RC68	171.04		
						RC96	94.75	RC89	99.55		
								RC96	98.21		

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

APPENDIX C

MANDATORY SFPF LEVY -- PROVINCIAL OR LOCAL TAX?

APPENDIX C

MANDATORY SFPF LEVY -- PROVINCIAL OR LOCAL TAX?

As indicated in the methodology section of this study (Chapter 4), the mandatory foundation levy on the commerical and industrial property of a locality may be considered as either part of the provincial contribution to the support of education or part of the local financial support to local schooling services. The results reported in the study operated under the latter definition. Whether or not this view was the "correct" one is a point of continual debate but as stated by Hill and Paige (cited in Alberta Education, 1981: 124), "the data do not contain criteria which would enable a judgment to be reached on what the "proper" share should be."

The following sections indicate to what extent the adoption of the alternative definition (i.e., levy is part of the provincial share) would have altered observed results.

Provincial Fiscal Appropriations

The acceptance of the stance that the provincial mandatory mill rate on all commerical and industrial property is a provincial tax and thereby part of the amount the province allocates to local school jurisdictions caused the following shifts in earlier reported fiscal equalization tendencies to be observed (Table C.1):

- correlations between jurisdictional wealth and provincial fiscal appropriations tended to strengthen significantly from 1975 to 1978 after which time the relationship lessen.
- a three to six percent decrease in the level of variation for all school jurisdictions; though annual changes under either assumption were approximately of the same magnitude.
    - the jurisdictions most affected by the change in definition were public school districts; i.e., assuming that the foundation levy is a provincial tax rather than local tax had the effect of reducing the level of variability 14

TABLE C.1

EQUALIZATION MEASURES FOR PROVINCIAL AND LOCAL FISCAL APPROPRIATIONS BY YEAR

	1975		1976		1977		1978		1979		1980	
Equalization Measure	A1[1]	A2[2]	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2
						PROVINCIAL						
Wealth Correlation	-.14	.40***	.04***	.29***	.01	.35***	-.09	.33***	-.55***	.27***	-.46***	.15*
Coefficient of Variation	.21	.17	.20	.16	.17	.14	.21	.16	.21	.16	.19	.13
Gini Coefficient	-.05	-.03	-.05	-.02	-.05	-.02	-.07	-.03	-.07	-.04	-.08	-.04
						LOCAL						
Wealth Correlation	.94***	.93***	.93***	.78***	.92***	.80***	.93***	.88***	.93***	.87***	.86***	.76***
Coefficient of Variation	.90	.78	.79	.67	.68	.63	.81	.69	.69	.60	.66	.59
Gini Coefficient	.19	.20	.19	.19	.19	.20	.18	.18	.18	.17	.15	.15

[1] A1 -- Assumes Mandatory Foundation Levy is a Local Tax

[2] A2 -- Assumes Mandatory Foundation Levy is a Provincial Tax

*p ≤ .05

***p ≤ .001

to 25 percent.

- school divisions showed virtually no change in variability when altering definitions regarding the mandatory foundation levy were adopted
- generally the value of the Gini coefficient were less negative indicating a stronger trend towards "equality" among local school jurisdictions.

Local Fiscal Appropriations

If the local share of funds available for a given jurisdiction was described exclusive of the mandatory foundation levy, the following shifts in equalization tendency occurred (Table C.1):

- correlation coefficients decreased slightly in magnitude but remained positive and statistically significant.
- the level of variation (1975 to 1980) dropped from 24 percent under the assumption that the mandatory foundation levy was a local tax to 19 percent under the assumption that only the supplementary requisition represented the local share.
  - the level of variation was essentially unchanged for divisions, counties, and separate school districts.
  - the level of variation for public school districts decreased as little as nine percent (1980) to a maximum of 38 percent (1976).
- overall the Gini coefficient remained relatively stable whether or not the foundation levy was treated as a local tax.

Discussion

On the basis of the aforementioned observed effects that altering definitions regarding the taxing authority of the foundation levy had on the extent to which fiscal equalization was achieved, the following summation statements are in order:

- only a slight increase in the degree of equalization obtained among local school jurisdictions was observed as a result of considering the foundation levy a provincial tax instead of a local tax.

- the only jurisdictional type that appeared to be significantly affected by the adopted definition was public school districts (significant increase in equalization observed under the assumption that the foundation levy is a provincial tax).
- as reflected by Tables C.2 and C.3, the province can be described as retaining a decreasing share of education costs since 1975 with this reduction varying 10 percent depending on the accepted definition.
- overall, more school systems experienced higher relative costs shares under assumption one (levy a local tax) than under assumption two (levy a provincial tax).

Thus, the definition of what constitutes the provincial contribution to the financing of education and what constitutes the local share would appear to have little, if any, effect on the extent to which fiscal equalization is said to be achieved among school jurisdictions. The definition adopted, therefore, would seem to be the subject of whether one chose to speak from the public or government perspective.

TABLE C.2

PROVINCIAL - LOCAL FISCAL APPROPRIATION SPLIT

(Assumption 1)

Types of Jurisdictions	1975 Prov[1] (%)	1975 Local[2] (%)	1976 Prov (%)	1976 Local (%)	1977 Prov (%)	1977 Local (%)	1978 Prov (%)	1978 Local (%)	1979 Prov (%)	1979 Local (%)	1980 Prov (%)	1980 Local (%)
All Jurisdictions[3]	72	28	70	30	68	32	66	44	63	37	60	40
Divisions	78	22	77	23	75	25	73	27	71	29	67	33
Counties	77	23	76	24	73	27	72	28	69	31	66	34
Public School Districts	65	35	64	36	61	39	58	42	55	45	52	48
R.C.S.S.D.	75	25	75	25	73	27	71	29	67	33	64	36
Others	85	15	86	14	86	14	68	32	77	23	76	24

[1] Provincial = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program Fund (Exclusive of the Mandatory Foundation Levy)

[2] Local = Supplementary Requisition + Mandatory Foundation Levy

[3] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public Districts

TABLE C.3

PROVINCIAL - LOCAL FISCAL APPROPRIATION SPLIT

(Assumption 2)

Types of Jurisdictions	1975		1976		1977		1978		1979		1980	
	Prov[1] (%)	Local[2] (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)	Prov (%)	Local (%)
All Jurisdictions[3]	80	20	79	21	77	23	75	25	73	27	70	30
Divisions	86	14	84	16	82	18	81	19	79	21	75	25
Counties	85	15	84	16	82	18	80	20	78	22	75	25
Public School Districts	75	25	73	27	71	29	69	31	67	33	64	36
R.C.S.S.D.	82	18	81	19	80	20	78	22	76	24	74	76
Others	87	13	88	12	89	11	86	14	81	19	80	20

[1] Provincial = Supplementary Requisition Equalization Grant + Declining Enrolment Grant + Small School Assistance Grant + Small School Jurisdiction Grant + Location Allowance Grant + Private School Opening Grant + Corporate Assessment Grant + Incremental Grant + School Foundation Program Fund (Inclusive of the Mandatory Foundation Levy)

[2] Local = Supplementary Requisition

[3] Includes Divisions, Counties, Public School Districts, Separate School Districts (R.C.S.S.D.), Consolidated School Districts, Protestant Separate School Districts, and Roman Catholic Public Districts

APPENDIX D

EFFECTS OF POWER EQUALIZATION WITH EITHER THE REVENUE PER PUPIL OR LOCAL MILL RATE FIXED

APPENDIX D

EFFECTS OF POWER EQUALIZATION WITH EITHER THE REVENUE PER PUPIL OR LOCAL MILL RATE FIXED

The following tables present a comparison of the existing and the power equalizing plans for the years 1975, 1978 and 1980. School jurisdictions are listed in ascending order according to their 1975 equalized assessment per eligible pupil.

Table D.1 shows the local mill rate levied by each school jurisdiction under the actual provincial allocation plan and the required mill rate had a power equalizing plan been adopted. The implementation of a power equalizing plan operated under three restrictions: (1) total revenue (provincial plus local) per pupil remained fixed for each school jurisdiction, (2) total provincial appropriations for all jurisdictions combined remained constant, and (3) total local appropriations for all school jurisdictions combined remained constant.

Table D.2 shows the generated revenue under each plan when the local mill rate levied under the existing allocation plan was not allowed to vary for any given school jurisdiction under power equalization. The revenue under power equalization was generated within the following restrictions: (1) total provincial appropriations for all school jurisdictions combined remained constant, (2) total local appropriations for all school jurisdictions combined remained constant, and (3) the amount allocated in sum to a given jurisdiction did not necessarily match the amount received through the funding mechanism that had been operationalized for a specific year.

TABLE D.1

LOCAL MILL RATES UNDER THE EXISTING AND THE POWER EQUALIZING FINANCE PLANS

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV61	26.56	35.35	8.79	56.92	50.56	-6.36	64.56	43.55	-21.01
RC26	43.26	13.85	-29.41	57.05	21.35	-35.70	66.54	24.74	-41.80
RC68	23.02	15.79	-7.23	29.35	19.64	-9.71	27.54	17.68	-9.86
DIST4910	26.56	17.26	-9.30	35.05	28.08	-6.97	40.88	25.24	-15.64
RC23	19.69	14.39	-5.30	38.67	24.67	-14.00	25.75	21.80	-3.95
RC111	21.00	16.71	-4.29	30.41	22.16	-8.25	20.09	19.16	-0.93
DIV51	15.90	18.12	2.22	22.52	25.35	2.83	29.00	24.28	-4.72
RC73	19.50	14.77	-4.73	25.00	23.08	-1.92	25.00	21.89	-3.11
RC96	17.61	16.70	-0.91	27.75	27.10	-0.65	30.48	22.36	-8.12
RC51	20.26	14.08	-6.18	29.35	27.80	-1.55	26.92	23.18	-3.74
RC64	14.84	16.30	1.46	21.37	19.17	-2.20	N/A	N/A	N/A
RC56	10.00	13.35	3.35	27.98	20.93	-7.05	28.55	20.79	-7.76
RC97	8.81	15.68	6.87	24.33	21.68	-2.65	22.05	20.32	-1.73
RC37	21.36	14.98	-6.38	27.43	20.05	-7.38	22.35	18.90	-3.45
RC18	18.87	16.05	-2.82	28.18	22.00	-6.18	31.35	19.53	-11.82

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
RC36	12.99	12.88	-0.11	33.52	21.12	-12.40	39.68	20.50	-19.18
RC105	17.05	17.03	-0.02	24.75	24.56	-0.19	33.43	23.76	-9.67
RC35	21.89	15.98	-5.91	33.06	21.28	-11.78	34.86	21.12	-13.74
RC31	11.36	12.48	1.12	24.23	20.26	-3.97	23.03	20.37	-2.66
RC65	8.64	15.91	7.27	20.19	22.39	2.20	25.72	22.52	-3.20
RC82	24.68	18.22	-6.46	31.32	28.15	-3.17	32.21	24.49	-7.72
RC88	23.69	17.47	-6.22	33.16	21.33	-11.83	30.48	20.07	-10.41
CON69	12.00	15.98	3.98	N/A	N/A	N/A	33.83	24.36	-9.47
DIV46	14.79	17.38	2.59	24.48	24.90	0.42	N/A	N/A	N/A
RC30	7.79	15.52	7.73	16.70	29.02	12.32	28.90	23.77	-5.13
RC110	15.00	15.40	0.40	22.70	21.94	-0.76	19.93	20.23	0.30
RC43	23.69	16.76	-6.93	33.16	21.44	-11.72	30.48	21.81	-8.67
RC67	14.84	15.04	0.20	21.83	23.33	1.50	N/A	N/A	N/A
RC50	25.97	18.24	-7.73	28.06	27.61	-0.45	25.11	20.60	-4.51
RC54	19.84	16.06	-3.78	29.20	22.36	-6.84	25.84	18.00	-7.84
RC49	21.60	16.55	-5.05	25.40	31.36	5.96	22.10	27.22	5.12
DIV52	32.68	22.76	-9.92	43.97	33.16	-10.81	49.86	27.32	-22.54
RC15	17.17	16.16	-1.01	28.19	22.32	-5.87	24.00	22.60	-1.40
CTY12	25.25	20.14	-5.11	33.65	28.70	-4.95	27.03	25.94	-1.09

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV63	25.34	18.47	-6.87	34.68	25.64	-9.04	32.00	24.48	-7.52
CTY11	24.87	18.85	-6.02	29.22	26.20	-3.02	29.00	23.47	-5.53
CP35	25.91	16.46	-9.45	15.00	21.92	6.92	20.94	22.12	1.18
RC79	18.00	15.75	-2.25	27.00	26.55	-0.45	25.00	23.18	-1.82
DIST4972	12.00	13.59	1.59	32.51	23.36	-9.15	28.64	20.79	-7.85
DIV43	25.49	19.46	-6.03	36.44	27.23	-9.21	40.86	24.25	-16.61
RC84	6.60	21.20	14.60	14.50	24.43	9.93	17.50	21.85	4.35
CTY19	19.10	21.15	2.05	33.64	30.38	-3.26	31.23	29.28	-1.95
DIST1738	18.48	17.27	-1.21	24.15	24.05	-0.10	22.00	22.55	0.55
RC21	22.50	17.53	-4.97	33.02	25.43	-7.59	26.08	23.02	-3.06
RC60	11.48	14.32	2.84	26.27	24.13	-2.14	27.50	22.01	-5.49
RC17	16.78	17.58	0.80	30.21	25.53	-4.68	24.32	23.38	-0.94
RC95	24.67	18.48	-6.19	33.15	30.21	-2.94	38.43	34.82	-3.61
DIST647	16.17	17.39	1.22	21.90	22.76	0.86	25.54	22.56	-2.98
DIST2228	21.80	16.44	-5.36	32.39	25.36	-7.03	22.69	22.29	-0.40
DIST2092	17.51	15.62	-1.89	26.05	23.59	-2.46	30.24	22.58	-7.66
DIV47	25.43	21.22	-4.21	35.08	32.92	-2.16	40.92	30.08	-10.84
RC28	17.74	16.85	-0.89	31.88	22.75	-9.13	32.55	22.85	-9.70
DIST1475	26.06	19.47	-6.59	37.20	24.26	-12.94	29.53	22.12	-7.41

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV12	32.21	19.63	-12.58	34.14	24.71	-9.43	28.77	22.92	-5.85
DIST3	20.70	18.43	-2.27	33.01	26.07	-6.94	24.87	23.03	-1.84
DIV37	26.57	20.87	-5.70	36.33	28.82	-7.51	32.93	26.28	-6.65
RC94	15.16	13.25	-1.91	14.68	20.29	5.61	16.07	20.19	4.12
PS6	19.99	17.00	-2.99	18.13	23.61	5.48	25.78	23.47	-2.31
CTY3	24.67	19.45	-5.22	34.44	27.30	-7.14	40.18	26.62	-13.56
RC104	17.05	16.50	-0.55	25.25	26.92	1.67	25.05	23.27	-1.78
CTY13	22.75	20.45	-2.30	30.56	27.31	-3.25	30.00	26.52	-3.48
CTY28	11.35	18.14	6.79	14.56	24.59	10.03	19.78	22.94	3.16
DIV50	21.89	21.56	-0.33	29.89	28.76	-1.13	34.86	26.36	-8.50
CTY26	19.43	18.70	-0.73	30.99	27.57	-3.42	27.20	24.85	-2.35
DIV2	15.00	18.17	3.17	22.00	26.05	4.05	24.00	23.55	-0.45
DIV6	23.79	19.65	-4.14	32.80	28.14	-4.66	33.03	25.62	-7.41
DIV10	23.49	21.24	-2.25	33.16	29.38	-3.78	30.48	25.68	-4.80
CTY10	23.95	20.61	-3.34	30.83	28.36	-2.47	26.04	25.61	-0.43
DIV32	18.57	19.11	0.54	29.93	26.44	-3.49	28.62	24.01	-4.61
CTY30	19.33	18.79	-0.54	29.01	27.34	-1.67	33.84	26.28	-7.56
CTY9	21.58	19.76	-1.82	31.13	26.69	-4.44	28.00	25.09	-2.91

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
CTY25	13.20	17.45	4.25	27.00	25.41	-1.59	24.29	22.46	-1.83
CTY23	20.00	18.93	-1.07	28.00	25.63	-2.37	25.00	23.08	-1.92
DIST2283	8.97	14.47	5.50	25.41	24.01	-1.40	29.99	25.29	-4.70
CTY31	21.00	17.81	-3.19	30.68	25.83	-4.85	25.00	23.25	-1.75
RC25	11.75	15.54	3.79	18.15	23.97	5.82	26.00	24.11	-1.89
DIV24	27.43	21.36	-6.07	35.85	30.68	-5.17	30.57	27.09	-3.48
CTY14	18.62	18.69	0.07	27.05	26.50	-0.55	26.00	24.17	-1.83
CTY22	21.94	20.17	-1.77	29.12	28.26	-0.86	30.49	26.16	-4.33
DIV62	9.01	17.05	8.04	16.69	23.59	6.90	26.88	22.07	-4.81
CTY29	21.61	19.60	-2.01	28.19	27.11	-1.08	22.17	23.68	1.51
DIST2665	12.30	16.79	4.49	17.55	20.99	3.44	N/A	N/A	N/A
DIST264	17.40	17.96	0.56	30.80	24.14	-6.66	24.27	21.91	-2.36
PS5	23.54	17.97	-5.57	27.48	22.52	-4.96	22.62	20.75	-1.87
CTY5	27.00	20.87	-6.13	36.61	28.16	-8.45	30.85	24.80	-6.05
DIST5258	15.67	16.43	0.76	30.28	27.85	-2.43	32.38	23.21	-9.17
DIV28	23.26	20.33	-2.93	31.91	28.12	-3.79	28.50	25.06	-3.44
DIST76	22.88	17.69	-5.19	33.33	26.97	-6.36	25.80	22.48	-3.32
CTY21	21.70	20.28	-1.42	28.04	28.45	0.41	33.83	28.24	-5.59
CTY4	29.15	20.76	-8.39	41.02	30.05	-10.97	43.95	29.63	-14.32

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIST2357	17.65	17.94	0.29	31.88	25.17	-6.71	32.48	25.03	-7.45
DIV38	16.75	18.29	1.54	33.84	28.88	-4.96	27.00	24.29	-2.71
DIV41	19.69	19.17	-0.52	27.42	28.46	1.04	27.42	24.80	-2.62
CTY20	17.05	17.77	0.72	24.50	25.76	1.26	25.62	25.38	-0.24
CTY17	17.76	18.59	0.83	22.35	24.59	2.24	24.35	23.34	-1.01
RC1	19.31	18.78	-0.53	26.33	25.86	-0.47	22.89	22.02	-0.87
DIV15	12.91	17.52	4.61	20.10	24.37	4.27	26.95	22.86	-4.09
DIST1315	11.49	16.77	5.28	26.28	24.55	-1.73	26.50	22.88	-3.62
CTY24	15.90	20.81	4.91	24.36	28.28	3.92	32.94	27.59	-5.35
RC9	18.54	17.61	-0.93	27.83	25.49	-2.34	27.31	22.42	-4.89
DIST5109	26.75	18.98	-7.77	36.47	31.17	-5.30	31.72	30.39	-1.33
CTY27	24.00	20.83	-3.17	33.55	28.79	-4.76	29.65	25.62	-4.03
DIST104	15.77	17.95	2.18	30.21	25.60	-4.61	26.00	23.72	-2.28
DIST168	26.52	18.43	-8.09	18.96	24.61	5.65	N/A	N/A	N/A
CTY1	23.02	22.31	-0.71	29.35	27.69	-1.66	27.50	25.04	-2.46
DIST2833	19.17	16.58	-2.59	30.29	22.78	-7.51	35.33	32.48	-2.85
RC128	N/A	N/A	N/A	N/A	N/A	N/A	20.43	24.87	4.44
DIST51	18.40	18.29	-0.11	27.55	26.60	-0.95	25.76	24.13	-1.63
DIV33	15.50	20.26	4.76	34.25	31.91	-2.34	38.25	31.53	-6.72

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
CON38	12.90	21.34	8.44	16.60	28.83	12.23	19.36	21.72	2.36
CTY18	22.16	21.27	-0.89	37.06	30.42	-6.64	34.38	28.22	-6.16
DIV9	16.00	21.03	5.03	29.50	29.67	0.17	29.00	27.88	-1.12
DIV60	20.18	19.88	-0.30	30.28	31.11	0.83	30.00	28.60	-1.40
CTY8	24.77	22.79	-1.98	33.04	32.16	-0.88	30.70	28.97	-1.73
DIV29	19.10	19.45	0.35	26.79	28.82	2.03	29.80	26.51	-3.29
CTY7	22.84	19.76	-3.08	34.15	33.43	-0.72	31.04	25.8[illegible]	-5.18
RC32	19.17	19.48	0.31	31.26	26.93	-4.33	35.33	32.44	-2.89
CTY16	22.09	21.68	-0.41	25.00	28.38	3.38	19.00	24.31	5.31
RC16	23.99	18.89	-5.10	30.09	27.39	-2.70	26.84	22.39	-4.45
RC7	19.56	19.66	0.10	26.73	27.36	0.63	22.07	24.66	2.59
CTY2	19.46	22.55	3.09	24.27	31.64	7.37	25.70	29.95	4.25
DIV16	26.09	24.71	-1.38	34.55	35.72	1.17	33.10	29.56	-3.54
CTY6	21.65	22.81	1.16	29.62	37.33	7.71	29.14	31.33	2.19
DIV30	12.37	20.91	8.54	28.47	30.97	2.50	33.21	32.87	-0.34
DIV54	19.00	21.00	2.00	26.50	29.34	2.84	33.83	28.00	-5.83
DIST19	19.40	19.58	0.18	26.43	27.42	0.99	22.90	23.01	0.11
DIST7	19.57	20.20	0.63	27.69	28.92	1.23	22.06	26.39	4.33
DIST1699	17.71	19.55	1.84	23.05	44.95	21.90	18.38	43.82	25.44

TABLE D.1 (continued)

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV8	21.07	25.83	4.76	27.83	40.56	12.73	25.11	34.58	9.47
CON8	24.34	30.67	6.33	N/A	N/A	N/A	20.51	28.82	8.31
DIST3063	18.56	20.72	2.16	20.33	29.86	9.53	20.56	29.88	9.32
DIV4	28.66	32.45	3.79	34.48	46.91	12.43	35.70	44.89	9.19
DIV1	22.50	38.51	16.01	24.00	56.14	32.14	26.50	50.78	24.28
DIST102	8.51	18.78	10.27	17.00	34.57	17.57	19.06	38.07	19.01
DIST4152	19.64	34.86	15.22	24.00	51.90	27.90	N/A	N/A	N/A
DIST4233	23.24	29.77	6.53	9.11	26.96	17.85	3.85	27.16	23.31
MEAN (WEIGHTED)	19.76	19.36		28.11	27.32		25.83	24.65	

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

N/A=DATA NOT AVAILABLE

TABLE D.2

REVENUE PER ELIGIBLE PUPIL UNDER THE EXISTING AND THE POWER EQUALIZING FINANCE PLANS (DOLLARS PER ELIGIBLE PUPIL)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

	1975			1978			1980		
JURISDICTION	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV61	2422	1346	-1076	3464	3229	-235	4093	4842	749
RC26	949	2184	1235	1462	2660	1198	2325	3828	1503
RC68	1082	1160	78	1346	1363	17	1662	1686	24
DIST4910	1182	1382	200	1924	1705	-219	2373	2504	131
RC23	986	1010	24	1690	1857	167	2049	1597	-452
RC111	1145	1084	-61	1518	1512	-6	1801	1255	-546
DIV51	1241	852	-389	1737	1144	-593	2282	1908	-374
RC73	1012	1006	-6	1582	1298	-284	2058	1685	-373
RC96	1144	941	-203	1857	1377	-480	2102	1985	-117
RC51	965	1074	109	1904	1605	-299	2179	1917	-262
RC64	1116	775	-341	1314	1037	-277	N/A	N/A	N/A
RC56	914	545	-369	1434	1363	-71	1954	2014	60
RC97	1074	479	-595	1486	1226	-260	1910	1469	-441
RC37	1026	1130	104	1374	1342	-32	1777	1410	-367
RC18	1100	1000	-100	1507	1369	-138	1836	1961	125

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
RC36	882	698	-184	1447	1620	173	1927	2433	506
RC105	1167	935	-232	1683	1352	-331	2234	2330	96
RC35	1095	1162	67	1458	1627	169	1985	2202	217
RC31	855	623	-232	1388	1325	-63	1914	1735	-179
RC65	1090	476	-614	1534	1082	-452	2117	1802	-315
RC82	1248	1318	70	1929	1689	-240	2302	2216	-86
RC88	1196	1238	42	1461	1612	151	1886	1901	15
CON69	1095	666	-429	N/A	N/A	N/A	2289	2358	69
DIV46	1190	813	-377	1706	1295	-411	N/A	N/A	N/A
RC30	1063	440	-623	1988	857	-1131	2234	1807	-427
RC110	1055	829	-226	1503	1176	-327	1902	1493	-409
RC43	1148	1310	162	1469	1674	205	2050	2046	-4
RC67	1030	825	-205	1598	1201	-397	N/A	N/A	N/A
RC50	1249	1423	174	1892	1509	-383	1937	1589	-348
RC54	1100	1114	14	1532	1566	34	1692	1596	-96
RC49	1134	1194	60	2148	1560	-588	2559	1859	-700
DIV52	1559	1837	278	2272	2268	-4	2568	3194	626
RC15	1107	961	-146	1529	1498	-31	2125	1859	-266
CTY12	1380	1394	14	1966	1870	-96	2438	2089	-349

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV63	1265	1362	97	1757	1820	63	2301	2448	147
CTY11	1291	1385	94	1795	1581	-214	2206	2006	-200
CP35	1128	1427	299	1502	924	-578	2079	1594	-485
RC79	1079	1045	-34	1819	1653	-166	2178	1979	-199
DIST4972	931	731	-200	1601	1789	188	1954	2017	63
DIV48	1333	1450	117	1866	1985	119	2280	2756	476
RC84	1452	406	-1046	1674	839	-835	2054	1202	-852
CTY19	1449	1070	-379	2081	1796	-285	2752	2238	-514
DIST1738	1183	1072	-111	1648	1443	-205	2119	1655	-464
RC21	1201	1280	79	1743	1936	193	2164	2096	-68
RC60	981	689	-292	1653	1487	-166	2069	2035	-34
RC17	1204	968	-236	1749	1696	-53	2198	2017	-181
RC95	1266	1392	126	2070	1996	-74	3273	3535	262
DIST647	1191	918	-273	1559	1176	-383	2120	2475	355
DIST2228	1126	1253	127	1737	1883	146	2095	1853	-242
DIST2092	1070	1030	-40	1616	1539	-77	2122	2240	118
DIV47	1454	1452	-2	2255	1927	-328	2827	2934	107
RC28	1154	1049	-105	1558	1744	186	2148	2295	147
DIST1475	1334	1499	165	1662	2028	366	2079	2329	250

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV12	1345	1878	533	1693	1942	249	2154	2221	67
DIST3	1262	1160	-102	1786	1823	37	2165	1858	-307
DIV37	1430	1522	92	1974	2003	29	2470	2402	-68
RC94	908	912	4	1390	798	-592	1898	1161	-737
PS6	1164	1124	-40	1617	1055	-562	2206	1902	-304
CTY3	1332	1433	101	1870	1937	67	2502	3004	502
RC104	1130	1040	-90	1845	1772	-73	2187	2124	-63
CTY13	1401	1319	-82	1871	1744	-127	2493	2323	-170
CTY28	1243	741	-502	1685	943	-742	2157	1620	-537
DIV50	1477	1364	-113	1970	1739	-231	2477	2469	-8
CTY26	1281	1153	-128	1889	1775	-114	2335	2080	-255
DIV2	1244	924	-320	1784	1292	-492	2213	1744	-469
DIV6	1346	1425	79	1928	1865	-63	2408	2460	52
DIV10	1455	1432	-23	2013	1900	-113	2414	2274	-140
CTY10	1412	1436	24	1943	1833	-110	2407	2097	-310
DIV32	1309	1139	-170	1811	1757	-54	2257	2217	-40
CTY30	1287	1161	-126	1873	1690	-183	2470	2565	95
CTY9	1354	1298	-56	1828	1783	-45	2358	2146	-212

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

	1975			1978			1980		
JURISDICTION	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
CTY25	1195	854	-341	1741	1662	-79	2111	2012	-99
CTY23	1297	1216	-81	1756	1687	-69	2169	2017	-152
DIST2283	991	609	-382	1645	1569	-76	2377	2363	-14
CTY31	1220	1334	114	1769	1900	131	2185	2142	-43
RC25	1065	747	-318	1642	1056	-586	2266	2081	-185
DIV24	1463	1678	215	2102	2255	153	2546	2645	99
CTY14	1281	1151	-130	1815	1620	-195	2272	2184	-88
CTY22	1382	1334	-48	1936	1713	-223	2459	2353	-106
DIV62	1168	597	-571	1616	991	-625	2074	2027	-47
CTY29	1343	1333	-10	1857	1684	-173	2226	1734	-492
DIST2665	1150	779	-371	1438	1081	-357	N/A	N/A	N/A
DIST264	1230	1080	-150	1654	1827	173	2059	1946	-113
PS5	1231	1441	210	1543	1635	92	1950	1825	-125
CTY5	1430	1633	203	1929	2105	176	2331	2298	-33
DIST5258	1126	1049	-77	1908	1908	0	2181	2522	341
DIV28	1393	1460	67	1926	1906	-20	2356	2216	-140
DIST76	1212	1420	208	1848	2175	327	2113	2220	107
CTY21	1389	1357	-32	1949	1680	-269	2654	2696	42
CTY4	1422	1869	447	2058	2529	471	2785	3584	799

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

	1975			1978			1980		
JURISDICTION	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIST2357	1229	1129	-100	1724	1947	223	2353	2641	288
DIV38	1253	1101	-152	1979	2139	160	2283	2249	-34
DIV41	1313	1276	-37	1950	1894	-56	2331	2437	106
CTY20	1217	1156	-61	1765	1743	-22	2385	2440	55
CTY17	1273	1181	-92	1684	1407	-277	2194	2096	-98
RC1	1287	1222	-65	1772	1646	-126	2069	1906	-163
DIV15	1200	968	-232	1670	1345	-325	2149	2176	27
DIST1315	1149	780	-369	1682	1702	20	2151	2271	120
CTY24	1425	1013	-412	1938	1490	-448	2593	2550	-43
RC9	1206	1194	-12	1747	1837	90	2108	2257	149
DIST5109	1300	1708	408	2135	2837	702	2856	3319	463
CTY27	1427	1492	65	1972	2123	151	2408	2465	57
DIST104	1229	1028	-201	1754	1887	133	2229	2274	45
DIST168	1262	1718	456	1686	1596	-90	N/A	N/A	N/A
CTY1	1528	1552	24	1897	1848	-49	2354	2165	-189
DIST2833	1136	1300	164	1561	1942	381	3053	3659	606
RC128	N/A	N/A	N/A	N/A	N/A	N/A	2338	1828	-510
DIST51	1253	1217	-36	1822	1912	90	2268	2390	122
DIV33	1388	1093	-295	2186	2258	72	2964	3320	356

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
CON38	1462	894	-568	1975	1125	-850	2041	1559	-482
CTY18	1457	1519	62	2084	2392	308	2652	2933	281
DIV9	1441	1048	-393	2033	1859	-174	2621	2521	-100
DIV60	1362	1358	-4	2131	2029	-102	2688	2772	84
CTY8	1561	1636	75	2204	2117	-87	2722	2537	-185
DIV29	1332	1375	43	1975	1898	-77	2492	2692	200
CTY7	1353	1623	270	2290	1996	-294	2430	2361	-69
RC32	1335	1362	27	1845	1806	-39	3049	3653	604
CTY16	1485	1510	25	1945	1858	-87	2285	2017	-268
RC16	1294	1620	326	1876	2094	218	2104	2870	766
RC7	1347	1357	10	1874	1838	-36	2318	2142	-176
CTY2	1545	1347	-198	2168	1679	-489	2815	2378	-437
DIV16	1692	1851	159	2447	2437	-10	2779	2866	87
CTY6	1563	1579	16	2557	2156	-401	2945	2640	-305
DIV30	1433	921	-512	2121	1886	-235	3089	2921	-168
DIV54	1439	1620	181	2010	1965	-45	2632	2983	351
DIST19	1341	1433	92	1878	1951	73	2163	2316	153
DIST7	1384	1448	64	1981	2132	151	2480	2424	-56
DIST1699	1340	1564	224	3079	3745	666	4119	4858	739

TABLE D.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)	EXISTING (1)	POWER (2)	CHANGE (2)-(1)
DIV8	1769	1628	-141	2779	2335	-444	3251	2641	-610
CON8	2101	1940	-161	N/A	N/A	N/A	2709	2267	-442
DIST3063	1420	1709	289	2046	2068	22	2809	2846	37
DIV4	2223	2560	337	3214	3116	-98	4219	4238	19
DIV1	2638	2165	-473	3846	2769	-1077	4772	3996	-776
DIST102	1287	1198	-89	2368	2667	299	3578	4028	450
DIST4152	2388	2351	-37	3556	4154	598	N/A	N/A	N/A
DIST4233	2040	3355	1315	1847	1823	-24	2552	2123	-429
AVERAGE (WEIGHTED)	1326	1326		1871	1871		2317	2317	

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

N/A=DATA NOT AVAILABLE

APPENDIX E

EFFECTS OF PERCENTAGE EQUALIZATION

APPENDIX E

EFFECTS OF PERCENTAGE EQUALIZATION

The following table presents a comparison of the existing and the percentage equalizing plan for the years 1975, 1978 and 1980. School jurisdictions are listed in ascending order according to their 1975 equalized assessment per eligible pupil.

Table E.1 shows the amount of provincial funds each jurisdiction received under both the existing plan and a percentage equalizing plan when such funds were taken as the sum of the Supplementary Requisition Equalization Grant, the Declining Enrolment Grant, the Small School Assistance Grant, the Small School Jurisdiction Grant, the Corporate Assessment Grant, the Location Allowance Grant, the Private School Opening Grant, the Increment Grant, and the School Foundation Program Fund. The provincial allocations under percentage equalization operated within the following restrictions: (1) total provincial appropriations for all school jurisdictions combined remained constant and (2) total local appropriations for all school jurisdictions combined remained constant.

TABLE E.1

REVENUE PER ELIGIBLE PUPIL UNDER THE EXISTING AND THE PERCENTAGE EQUALIZING FINANCE PLANS
(DOLLARS PER ELIGIBLE PUPIL)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

	1975			1978			1980		
JURISDICTION	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
DIV61	2422	1354	-1068	3464	2166	-1298	4093	3029	-1064
RC26	949	1387	438	1462	1957	495	2325	2471	146
RC68	1082	1324	242	1346	1873	527	1662	2332	670
DIST4910	1182	1372	190	1924	1932	8	2373	2453	80
RC23	986	1328	342	1690	1907	217	2049	2315	266
RC111	1145	1329	184	1518	1882	364	1801	2288	487
DIV51	1241	1333	92	1737	1870	133	2282	2396	114
RC73	1012	1311	299	1582	1825	243	2058	2289	231
RC96	1144	1334	190	1857	1875	18	2102	2393	291
RC51	965	1339	374	1904	1924	20	2179	2381	202
RC64	1116	1300	184	1314	1833	519	N/A	N/A	N/A
RC56	914	1299	385	1434	1878	444	1954	2628	674
RC97	1074	1290	216	1486	1847	361	1910	2275	365
RC37	1026	1333	307	1374	1861	487	1777	2284	507
RC18	1100	1320	220	1507	1862	355	1836	2348	512

TABLE E.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
RC36	882	1300	418	1447	1886	439	1927	2404	477
RC105	1167	1340	173	1683	1869	186	2234	2445	211
RC35	1095	1334	239	1458	1895	437	1985	2394	409
RC31	855	1297	442	1388	1836	448	1914	2280	366
RC65	1090	1278	188	1534	1815	281	2117	2331	214
RC82	1248	1346	98	1929	1880	-49	2302	2388	86
RC88	1196	1312	116	1461	1889	428	1886	2345	459
CON69	1095	1295	200	N/A	N/A	N/A	2289	2446	157
DIV46	1190	1306	116	1706	1847	141	N/A	N/A	N/A
RC30	1063	1269	206	1988	1799	-189	2234	2318	84
RC110	1055	1299	244	1503	1829	326	1902	2251	349
RC43	1148	1352	204	1469	1908	439	2050	2387	337
RC67	1030	1292	262	1598	1823	225	N/A	N/A	N/A
RC50	1249	1355	106	1892	1873	-19	1937	2321	384
RC54	1100	1340	240	1532	1888	356	1692	2140	448
RC49	1134	1335	201	2148	1846	-302	2559	2248	-311
DIV52	1559	1445	-114	2272	2006	-266	2568	2566	-2
RC15	1107	1308	201	1529	1866	337	2125	2298	173
CTY12	1380	1353	-27	1966	1925	-41	2438	2392	-46

TABLE E.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
DIV63	1265	1315	50	1757	1859	102	2301	2462	161
CTY11	1291	1358	67	1795	1884	89	2206	2354	148
CP35	1128	1348	220	1502	1731	229	2079	2209	130
RC79	1079	1338	259	1819	1849	30	2178	2299	121
DIST4972	931	1309	378	1601	1891	290	1954	2340	386
DIV48	1333	1376	43	1866	1963	97	2280	2510	230
RC84	1452	1238	-214	1674	1781	107	2054	2269	215
CTY19	1449	1299	-150	2081	1892	-189	2752	2378	-374
DIST1738	1183	1330	147	1648	1852	204	2119	2268	149
RC21	1201	1344	143	1743	1937	194	2164	2344	180
RC60	981	1278	297	1653	1854	201	2069	2359	290
RC17	1204	1303	99	1749	1879	130	2198	2294	96
RC95	1266	1346	80	2070	1921	-149	3273	2730	-543
DIST647	1191	1278	87	1559	1809	250	2120	3031	911
DIST2228	1126	1338	212	1737	1926	189	2095	2280	185
DIST2092	1070	1315	245	1616	1851	235	2122	2390	268
DIV47	1454	1356	-98	2255	1919	-336	2827	2551	-276
RC28	1154	1321	167	1558	1903	345	2148	2422	274
DIST1475	1334	1370	36	1662	1947	285	2079	2547	468

TABLE E.1 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	1975			1978			1980		
JURISDICTION	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
DIV12	1345	1453	108	1693	1968	275	2154	2429	275
DIST3	1262	1287	25	1786	1868	82	2165	2225	60
DIV37	1430	1365	-65	1974	1931	-43	2470	2434	-36
RC94	908	1303	395	1390	1796	406	1898	2213	315
PS6	1164	1281	117	1617	1676	59	2206	2244	38
CTY3	1332	1361	29	1870	1932	62	2502	2583	81
RC104	1130	1329	199	1845	1895	50	2187	2371	184
CTY13	1401	1333	-68	1871	1906	35	2493	2422	-71
CTY28	1243	1297	54	1685	1754	69	2157	2266	109
DIV50	1477	1401	-76	1970	1952	-18	2477	2455	-22
CTY26	1281	1307	26	1889	1886	-3	2335	2354	19
DIV2	1244	1288	44	1784	1839	55	2213	2272	59
DIV6	1346	1366	20	1928	1917	-11	2408	2449	41
DIV10	1455	1387	-68	2013	1948	-65	2414	2405	-9
CTY10	1412	1366	-46	1943	1929	-14	2407	2345	-62
DIV32	1309	1327	18	1811	1912	101	2257	2397	140
CTY30	1287	1306	19	1873	1862	-11	2470	2447	-23
CTY9	1354	1335	-19	1828	1893	65	2358	2373	15

TABLE E.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
CTY25	1195	1293	98	1741	1876	135	2111	2320	209
CTY23	1297	1326	29	1756	1861	105	2169	2297	128
DIST2283	991	1244	253	1645	1840	195	2377	2398	21
CTY31	1220	1390	170	1769	1955	186	2185	2361	176
RC25	1065	1246	181	1642	1752	110	2266	2315	49
DIV24	1463	1422	-41	2102	2020	-82	2546	2493	-53
CTY14	1281	1316	35	1815	1855	40	2272	2353	81
CTY22	1382	1335	-47	1936	1880	-56	2459	2421	-38
DIV62	1168	1218	50	1616	1733	117	2074	2336	262
CTY29	1343	1349	6	1857	1893	36	2226	2259	33
DIST2665	1150	1242	92	1438	1742	304	N/A	N/A	N/A
DIST264	1230	1296	66	1654	1895	241	2059	2301	242
PS5	1231	1360	129	1543	1873	330	1950	2281	331
CTY5	1430	1382	-48	1929	1973	44	2331	2412	81
DIST5258	1126	1338	212	1908	1946	38	2181	2490	309
DIV28	1393	1385	-8	1926	1910	-16	2356	2348	-8
DIST76	1212	1360	148	1848	1973	125	2113	2343	230
CTY21	1389	1353	-36	1949	1874	-75	2654	2524	-130
CTY4	1422	1507	85	2058	2117	59	2785	2822	37

TABLE E.1 (continued)

JURISDICTION	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	1975			1978			1980		
	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
DIST2357	1229	1318	89	1724	1923	199	2353	2488	135
DIV38	1253	1325	72	1979	1963	-16	2283	2341	58
DIV41	1313	1359	46	1950	1865	-85	2331	2398	67
CTY20	1217	1362	145	1765	1865	100	2385	2399	14
CTY17	1273	1352	79	1684	1836	152	2194	2377	183
RC1	1287	1318	31	1772	1841	69	2069	2247	178
DIV15	1200	1368	168	1670	1881	211	2149	2490	341
DIST1315	1149	1247	98	1682	1843	161	2151	2359	208
CTY24	1425	1265	-160	1938	1797	-141	2593	2438	-155
RC9	1206	1318	112	1747	1860	113	2108	2350	242
DIST5109	1300	1438	138	2135	2245	110	2856	2753	-103
CTY27	1427	1345	-82	1972	1980	8	2408	2436	28
DIST104	1229	1274	45	1754	1896	142	2229	2333	104
DIST168	1262	1441	179	1686	1679	-7	N/A	N/A	N/A
CTY1	1528	1437	-91	1897	1948	51	2354	2405	51
DIST2833	1136	1365	229	1561	1891	330	3053	2880	-173
RC128	N/A	N/A	N/A	N/A	N/A	N/A	2338	2155	-183
DIST51	1253	1316	63	1822	1853	31	2268	2314	46
DIV33	1388	1320	-68	2186	2040	-146	2964	2740	-224

TABLE E.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975			1978			1980		
	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)	EXISTING (1)	PERCENTAGE (2)	CHANGE (2)-(1)
CON38	1462	1245	-217	1975	1695	-280	2041	2203	162
CTY18	1457	1425	-32	2084	2099	15	2652	2614	-38
DIV9	1441	1249	-192	2033	1868	-165	2621	2431	-190
DIV60	1362	1341	-21	2131	1949	-182	2688	2513	-175
CTY8	1561	1387	-174	2204	1917	-287	2722	2397	-325
DIV29	1332	1398	66	1975	1932	-43	2492	2522	30
CTY7	1353	1464	111	2290	2023	-267	2430	2532	102
RC32	1335	1371	36	1845	1889	44	3049	2874	-175
CTY16	1485	1377	-108	1945	1894	-51	2285	2239	-46
RC16	1294	1369	75	1876	1951	75	2104	2884	780
RC7	1347	1303	-44	1874	1839	-35	2318	2213	-105
CTY2	1545	1279	-266	2168	1782	-386	2815	2256	-559
DIV16	1692	1457	-235	2447	2028	-419	2779	2572	-207
CTY6	1563	1379	-184	2557	1951	-606	2945	2457	-488
DIV30	1433	1160	-273	2121	1823	-298	3089	2474	-615
DIV54	1439	1539	100	2010	2024	14	2632	2698	66
DIST19	1341	1310	-31	1878	1825	-53	2163	2205	42
DIST7	1384	1298	-86	1981	1862	-119	2480	2182	-298
DIST1699	1340	1502	162	3079	2116	-963	4119	2295	-1824

TABLE E.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	1975 EXISTING (1)	1975 PERCENTAGE (2)	1975 CHANGE (2)-(1)	1978 EXISTING (1)	1978 PERCENTAGE (2)	1978 CHANGE (2)-(1)	1980 EXISTING (1)	1980 PERCENTAGE (2)	1980 CHANGE (2)-(1)
DIV8	1769	1374	-395	2779	1900	-879	3251	2376	-875
CON8	2101	1469	-632	N/A	N/A	N/A	2709	2247	-462
DIST3063	1420	1482	62	2046	1818	-228	2809	2306	-503
DIV4	2223	1689	-534	3214	2274	-940	4219	3052	-1167
DIV1	2638	1470	-1168	3846	1738	-2108	4772	2589	-2183
DIST102	1287	1142	-145	2368	1532	-836	3578	1983	-1595
DIST4152	2388	1725	-663	3556	2213	-1343	N/A	N/A	N/A
DIST4233	2040	2282	242	1847	929	-918	2552	-425	-2977
AVERAGE (WEIGHTED)	1326	1326		1871	1871		2317	2317	

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

N/A=DATA NOT AVAILABLE

APPENDIX F

PRICE INDEX

APPENDIX F

PRICE INDEX

This appendix reports the construction of a price index used in one stage of the investigation of funding formulas.

METHOD OF CONSTRUCTION

In accordance with Atherton (1968) and Peat, Marwick and Partners (1981a), the index was of the fixed base year, fixed weight variety and was compiled using Laspeyres' formula.

Electing the system of input classification used by the Department of Education, the index was compiled from four major subindexes:

- an instructional subindex,
- an operation and maintenance subindex,
- an administration subindex, and
- a transportation subindex.

Phase One: Expenditure Patterns

The first phase of construction involved the establishment of expenditure patterns from 1975 to 1980 within each of four categories: instruction, operation and maintenance, administration, and transportation. Although the use of the base year weighting formula required that only the 1975 patterns be examined, Atherton (1968:73) remarked that "a more thorough analysis would provide a check on the appropriateness of the use of a base year weighting system." Accordingly, the pattern of expenditure for each of the six years was examined.

Tables F.1 through F.6 presents a breakdown of operating expenditures for all local school jurisdictions and types of school jurisdictions. Representative of these tables is the stability of expenditure patterns for the six year period within each type of jurisdiction and for all school jurisdictions. Therefore, the use of a base year weighting system was considered justified.

Phase Two: Weighting Patterns

The second phase thus entailed the determination of weighting patterns.

As demonstrated in phase one, the changes in percentage patterns across and within jurisdictional type showed little variation over the period 1975 to 1980. The process of weighting, then, required the categorial percentage breakdown for the base year (1975) to be converted to a decimal.

Instruction. Table F.1 shows that instruction, as a percentage of the total operating expenditure, has shown little variation over the period 1975 to 1980, varying from 74.3 percent in 1975 to 71.7 percent in 1980. Tables F.2 through F.6 show that the percentage of expenditure devoted to instruction by different types of school systems also remained relatively stable: 67.9 to 65.9 percent (divisions), 69.8 to 69.1 percent (counties), 78.1 to 74.2 percent (public school districts), 77.1 to 74.5 percent (separate school districts), and 77.6 to 74.7 percent (consolidated school districts, protestant separate school districts, and roman catholic school districts).

Taking 1975 as the base year, the appropriate weights for the instructional subindex were:

Provincial	*.743*
Divisions	*.675*
Counties	*.696*
Districts (Public)	*.781*
R.C.S.S.D.	*.766*
Other	*.776*

TABLE F.1

OPERATING EXPENDITURES FOR ALL SCHOOL JURISDICTIONS 1975 - 1980
(THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION $	INSTRUCTION %	OPERATION AND MAINTENANCE $	OPERATION AND MAINTENANCE %	ADMINISTRATION $	ADMINISTRATION %	TRANSPORTATION $	TRANSPORTATION %	TOTAL $	TOTAL %
1975	372937	74.28	71617	14.26	26281	5.23	31249	6.22	502085	100.00
1976	423026	73.86	83773	14.63	30002	5.24	35909	6.27	572713	100.00
1977	484292	73.89	97822	14.92	35027	5.34	38309	5.84	655449	100.00
1978	526524	73.00	109059	15.12	41240	5.72	44445	6.16	721268	100.00
1979	584817	72.65	122868	15.26	46359	5.76	50967	6.33	805011	100.00
1980	642357	71.73	138608	15.48	55628	6.21	58984	6.59	895577	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF
ALBERTA SCHOOL BOARDS, 1975 - 1980

TABLE F.2

OPERATING EXPENDITURES FOR DIVISIONS 1975 - 1980
(THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION $	%	OPERATION AND MAINTENANCE $	%	ADMINISTRATION $	%	TRANSPORTATION $	%	TOTAL $	%
1975	56302	67.46	11262	13.49	4789	5.74	11107	13.31	83460	100.00
1976	65114	67.71	13191	13.72	5463	5.68	12396	12.89	96164	100.00
1977	73943	67.89	15293	14.04	6320	5.80	13361	12.27	108916	100.00
1978	81763	67.49	17610	14.54	6779	5.60	14999	12.38	121151	100.00
1979	89929	66.76	20633	15.32	7579	5.63	16566	12.30	134707	100.00
1980	100789	65.86	23964	15.66	9334	6.10	18939	12.38	153027	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF ALBERTA SCHOOL BOARDS, 1975 - 1980

TABLE F.3

OPERATING EXPENDITURES FOR COUNTIES 1975 - 1980
(THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION $	INSTRUCTION %	OPERATION AND MAINTENANCE $	OPERATION AND MAINTENANCE %	ADMINISTRATION $	ADMINISTRATION %	TRANSPORTATION $	TRANSPORTATION %	TOTAL $	TOTAL %
1975	73987	69.58	12866	12.10	5635	5.30	13847	13.02	106335	100.00
1976	82959	69.81	14056	11.83	6661	5.61	15161	12.76	118837	100.00
1977	93204	69.36	17206	12.80	7591	5.65	16370	12.18	134372	100.00
1978	105002	69.33	19985	13.20	8609	5.68	17862	11.79	151457	100.00
1979	117614	69.53	22193	13.12	9517	5.63	19831	11.72	169154	100.00
1980	131260	69.05	25356	13.34	10902	5.73	22575	11.88	190093	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF ALBERTA SCHOOL BOARDS, 1975 - 1980

TABLE F.4

OPERATING EXPENDITURES FOR PUBLIC SCHOOL DISTRICTS 1975 - 1980
(THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION $	INSTRUCTION %	OPERATION AND MAINTENANCE $	OPERATION AND MAINTENANCE %	ADMINISTRATION $	ADMINISTRATION %	TRANSPORTATION $	TRANSPORTATION %	TOTAL $	TOTAL %
1975	177224	78.07	35474	15.63	10260	4.52	4035	1.78	226992	100.00
1976	198858	77.42	41453	16.14	11304	4.40	5245	2.04	256861	100.00
1977	229201	76.97	48486	16.28	14001	4.70	6085	2.04	297773	100.00
1978	244095	75.60	53234	16.49	18158	5.62	7408	2.29	322894	100.00
1979	273135	75.17	59923	16.49	20694	5.69	9621	2.65	363373	100.00
1980	291434	74.19	65243	16.61	24890	6.34	11267	2.87	392834	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF ALBERTA SCHOOL BOARDS, 1975 - 1980

TABLE F.5

OPERATING EXPENDITURES FOR ROMAN CATHOLIC SEPARATE SCHOOL DISTRICTS 1975 - 1980
(THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION		OPERATION AND MAINTENANCE		ADMINISTRATION		TRANSPORTATION		TOTAL	
	$	%	$	%	$	%	$	%	$	%
1975	59596	76.61	11155	14.34	5019	6.45	2018	2.59	77788	100.00
1976	67885	75.33	13756	15.26	5704	6.33	2774	3.08	90119	100.00
1977	78855	77.12	15192	14.86	6071	5.94	2136	2.09	102253	100.00
1978	85112	76.08	16419	14.68	6634	5.93	3709	3.31	111874	100.00
1979	93054	75.55	18261	14.83	7456	6.05	4401	3.57	123172	100.00
1980	105985	74.45	21753	15.28	9096	6.39	5529	3.88	142363	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF ALBERTA SCHOOL BOARDS, 1975 - 1980

TABLE F.6

OPERATING EXPENDITURES FOR OTHER SCHOOL DISTRICTS 1975 - 1980 (THOUSANDS OF DOLLARS)

YEAR	INSTRUCTION $	INSTRUCTION %	OPERATION AND MAINTENANCE $	OPERATION AND MAINTENANCE %	ADMINISTRATION $	ADMINISTRATION %	TRANSPORTATION $	TRANSPORTATION %	TOTAL $	TOTAL %
1975	5838	77.62	861	11.45	579	7.70	243	3.23	7521	100.00
1976	8222	76.53	1318	12.27	869	8.09	335	3.12	10744	100.00
1977	9100	74.91	1646	13.55	1045	8.60	358	2.95	12149	100.00
1978	10565	75.98	1812	13.03	1060	7.63	468	3.37	13905	100.00
1979	11098	75.91	1859	12.72	1114	7.62	549	3.75	14620	100.00
1980	12903	74.69	2293	13.27	1407	8.14	674	3.90	17276	100.00

SOURCES: GOVERNMENT OF ALBERTA, DEPARTMENT OF EDUCATION, FINANCIAL AND STATISTICAL REPORT OF ALBERTA SCHOOL BOARDS, 1975 - 1980

Operation and Maintenance. Table F.1 shows that operation and maintenance, as a percentage of the total operating expenditure, remained relatively stable during the period 1975 to 1980, ranging from 14.3 percent in 1975 to 15.5 percent in 1980. Tables F.2 through F.6 show that this stability remained over each jurisdictional type as well. Here, divisions ranged from 13.5 to 15.7 percent, counties ranged from 11.8 to 13.3 percent, public school districts ranged from 15.6 to 16.6 percent, separate school districts ranged from 14.3 to 15.3 percent, and all other jurisdictions combined ranged from 11.5 to 13.6 percent.

Converting the percentages for the base year (1975) to weights for the operation and maintenance subindex produced the following:

Provincial	*.143*
Divisions	*.135*
Counties	*.121*
Districts (Public)	*.156*
R.C.S.S.D.	*.143*
Other	*.115*

Administration. Table F.1 shows that administration, as a percentage of the total operating expenditure, has shown little variation over the period 1975 to 1980, varying from 5.2 percent in 1975 to 6.2 percent in 1980. Tables F.2 through F.6 show that the percentage of expenditure devoted to administration by different types of school systems also remained relatively stable: 5.6 to 6.1 percent (divisions), 5.3 to 5.7 percent (counties), 4.4 to 6.3 percent (public school districts), 5.9 to 6.5 percent (separate school districts), and 7.6 to 8.6 percent (consolidated school districts, protestant separate school districts, and roman catholic school districts).

Expressing the base year (1975) percentages as weights for the administration subindex gave the following figures:

Provincial	*.052*
Divisions	*.057*
Counties	*.053*
Districts (Public)	*.045*
R.C.S.S.D.	*.065*
Other	*.077*

Transportation. Table F.1 shows that transportation, as a percentage of the total operating expenditure, has shown little variation over the period 1975 to 1980, ranging from a low of 5.8 percent in 1977 to a high of 6.6 percent in 1980 with a mean of 6.2 percent for the six years. Tables F.2 through F.6 show that the percentage of expenditure devoted to transportation by different types of school systems also showed little variation: 12.3 to 13.3 percent (divisions), 11.7 to 13.0 percent (counties), 1.8 to 2.9 percent (public school districts), 2.1 to 3.9 percent (separate school districts), and 3.0 to 3.9 percent (consolidated school districts, protestant separate school districts, and roman catholic school districts).

Expressing the base year (1975) percentages as weights for the transportation subindex gave the following figures:

Provincial	*.062*
Divisions	*.133*
Counties	*.130*
Districts (Public)	*.018*
R.C.S.S.D.	*.026*
Other	*.032*

Summary. A summary of the weights used in compiling major subindexes into a provincial subindex and jurisdictional subindexes is set out below:

	Prov	*Div*	*Cty*	*Dist*	*RC*	*Other*
Instruction Subindex	*.743*	*.675*	*.696*	*.781*	*.766*	*.776*
Operation and Maintenance Subindex	*.143*	*.135*	*.121*	*.156*	*.143*	*.115*
Administration Subindex	*.052*	*.057*	*.053*	*.045*	*.065*	*.077*
Transportation Subindex	*.062*	*.133*	*.130*	*.018*	*.026*	*.032*

Phase Three: Provincial and Jurisdictional Subindexes

In the final phase of the construction of a price index, each of the major subindexes developed earlier were weighted by the subindex weighting patterns established in phase two and summed to provide the annual values.

The proxy for educational prices was as adopted by Peat, Marwick and Partners (1981a), namely, educational cost per pupil. The 1975 through 1980 expenditures broken down into four of the major expenditure categories (instruction, operation and maintenance, administration, and transportation) and enrolments were the base data from which price increases were approximated. The cost per pupil changes in each category were weighted by the pattern of 1975 educational expenditures. This procedure paralleled the procedure utilized in the study conducted by Peat, Marwick and Partners (1981a,b) on the disaggregation and revision of the Alberta Education Price Index.

Table F.7 shows details of the construction of the provincial subindex. As indicated by Table F.7, price levels have increased 78.4 percent since 1975. The average annual rate of price level increase was 15.7 percent.

Tables F.8 through F.12 shows details of the construction of jurisdictional subindexes. As indicated by these tables, there is variation over the six years between the types of jurisdictions. That is, since 1975 divisions have shown a 83.4 percent increase in price level, counties a 78.8 percent increase, public school districts a 73.1 percent increase, separate school districts a 83.0 percent increase, and consolidated school districts, protestant separate school district, and roman catholic public school districts combined showed the greatest increase of 129.7 percent. Annual increases in price level within each type were uneven over the period 1975 to 1980.

TABLE F.7

DETAILS OF CONSTRUCTION OF SUBINDEX FOR ALL SCHOOL JURISDICTIONS
(1975=100)

YEAR	INSTRUCTION P.R.	INSTRUCTION W.P.R.	OPERATION AND MAINTENANCE P.R.	OPERATION AND MAINTENANCE W.P.R.	ADMINISTRATION P.R.	ADMINISTRATION W.P.R.	TRANSPORTATION P.R.	TRANSPORTATION W.P.R.	SUBINDEX
1975	100.00	74.28	100.00	14.26	100.00	5.23	100.00	6.22	100.00
1976	113.43	84.25	116.97	16.69	114.16	5.98	114.91	7.15	114.07
1977	129.86	96.46	136.59	19.48	133.28	6.98	122.59	7.63	130.55
1978	141.18	104.87	152.28	21.72	156.92	8.21	142.23	8.85	143.65
1979	156.81	116.48	171.56	24.47	176.39	9.23	163.10	10.15	160.33
1980	172.24	127.94	193.54	27.61	211.66	11.08	188.76	11.75	178.37

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

TABLE F.8

DETAILS OF CONSTRUCTION OF SUBINDEX FOR DIVISIONS
(1975=100)

YEAR	INSTRUCTION P.R.	INSTRUCTION W.P.R.	OPERATION AND MAINTENANCE P.R.	OPERATION AND MAINTENANCE W.P.R.	ADMINISTRATION P.R.	ADMINISTRATION W.P.R.	TRANSPORTATION P.R.	TRANSPORTATION W.P.R.	SUBINDEX
1975	100.00	67.46	100.00	13.49	100.00	5.74	100.00	13.31	100.00
1976	115.65	78.02	117.13	15.81	114.09	6.55	111.60	14.85	115.22
1977	131.33	88.60	135.80	18.32	131.97	7.57	120.28	16.01	130.50
1978	145.22	97.97	156.36	21.10	141.57	8.12	135.04	17.97	145.16
1979	159.73	107.75	183.21	24.72	158.27	9.08	149.14	19.85	161.40
1980	179.02	120.76	212.79	28.71	194.91	11.18	170.51	22.69	183.35

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

TABLE F.9

DETAILS OF CONSTRUCTION OF SUBINDEX FOR COUNTIES
(1975=100)

YEAR	INSTRUCTION P.R.	INSTRUCTION W.P.R.	OPERATION AND MAINTENANCE P.R.	OPERATION AND MAINTENANCE W.P.R.	ADMINISTRATION P.R.	ADMINISTRATION W.P.R.	TRANSPORTATION P.R.	TRANSPORTATION W.P.R.	SUBINDEX
1975	100.00	69.58	100.00	12.10	100.00	5.30	100.00	13.02	100.00
1976	112.13	78.02	109.25	13.22	118.21	6.26	109.49	14.26	111.76
1977	125.97	87.65	133.73	16.18	134.71	7.14	118.23	15.40	126.37
1978	141.92	98.75	155.34	18.79	152.76	8.10	129.00	16.80	142.43
1979	158.97	110.61	172.50	20.87	168.88	8.95	143.22	18.65	159.08
1980	177.41	123.44	197.09	23.85	193.45	10.25	163.04	21.23	178.77

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

TABLE F.10

DETAILS OF CONSTRUCTION OF SUBINDEX FOR PUBLIC SCHOOL DISTRICTS
(1975=100)

YEAR	INSTRUCTION P.R.	INSTRUCTION W.P.R.	OPERATION AND MAINTENANCE P.R.	OPERATION AND MAINTENANCE W.P.R.	ADMINISTRATION P.R.	ADMINISTRATION W.P.R.	TRANSPORTATION P.R.	TRANSPORTATION W.P.R.	SUBINDEX
1975	100.00	78.07	100.00	15.63	100.00	4.52	100.00	1.78	100.00
1976	112.21	87.61	116.86	18.26	110.18	4.98	129.99	2.31	113.16
1977	129.33	100.97	136.68	21.36	136.47	6.17	150.81	2.68	131.18
1978	137.73	107.53	150.06	23.45	176.98	8.00	183.60	3.26	142.25
1979	154.12	120.33	168.92	26.40	201.70	9.12	238.44	4.24	160.08
1980	164.44	128.39	183.92	28.74	242.60	10.97	279.24	4.96	173.06

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

TABLE F.11

DETAILS OF CONSTRUCTION OF SUBINDEX FOR ROMAN CATHOLIC SEPARATE SCHOOL DISTRICTS
(1975=100)

YEAR	INSTRUCTION		OPERATION AND MAINTENANCE		ADMINISTRATION		TRANSPORTATION		SUBINDEX
	P.R.	W.P.R.	P.R.	W.P.R.	P.R.	W.P.R.	P.R.	W.P.R.	
1975	100.00	76.61	100.00	14.34	100.00	6.45	100.00	2.59	100.00
1976	113.91	87.27	123.31	17.68	113.66	7.33	137.47	3.57	115.85
1977	132.32	101.37	136.18	19.53	120.96	7.80	105.85	2.75	131.45
1978	142.81	109.42	147.19	21.11	132.19	8.53	183.80	4.77	143.82
1979	156.14	119.62	163.70	23.48	148.56	9.58	218.13	5.66	158.34
1980	177.84	136.25	195.00	27.97	181.25	11.69	274.01	7.11	183.01

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

TABLE F.12

DETAILS OF CONSTRUCTION OF SUBINDEX FOR OTHER SCHOOL DISTRICTS
(1975=100)

YEAR	INSTRUCTION P.R.	INSTRUCTION W.P.R.	OPERATION AND MAINTENANCE P.R.	OPERATION AND MAINTENANCE W.P.R.	ADMINISTRATION P.R.	ADMINISTRATION W.P.R.	TRANSPORTATION P.R.	TRANSPORTATION W.P.R.	SUBINDEX
1975	100.00	77.62	100.00	11.45	100.00	7.70	100.00	3.23	100.00
1976	140.83	109.32	153.05	17.52	150.06	11.56	138.01	4.45	142.85
1977	155.87	120.99	191.12	21.88	180.41	13.89	147.54	4.76	161.52
1978	180.95	140.46	210.44	24.09	183.07	14.10	192.98	6.23	184.87
1979	190.08	147.55	215.94	24.72	192.24	14.81	226.20	7.30	194.37
1980	221.00	171.55	266.25	30.48	242.83	18.70	277.85	8.96	229.69

P.R. = PRICE RELATIVE; W.P.R. = WEIGHTED PRICE RELATIVE

APPENDIX G

PROVINCIAL FISCAL APPROPRIATIONS PER ELIGIBLE PUPIL UNDER ALTERNATIVE EDUCATIONAL FINANCE PLANS FOR THE YEAR 1980

APPENDIX G

PROVINCIAL FISCAL APPROPRIATIONS PER ELIGIBLE PUPIL UNDER ALTERNATIVE EDUCATIONAL FINANCE PLANS FOR THE YEAR 1980

The following tables present the amount of provincial funds each school jurisdiction received under the existing finance plan and what each would have received under (1) a power equalizing plan with the local tax effort remaining at the same level as under the existing plan and (2) a percentage equalizing plan.

Table G.1 displays this information under the assumption that the mandatory foundation levy is a provincial tax. Table G.2, on the other hand, shows the allocation of provincial funds under each of the three finance plans assuming that the mandatory foundation levy is a local tax.

TABLE G.1

PROVINCIAL APPROPRIATIONS PER ELIGIBLE PUPIL UNDER ALTERNATIVE EDUCATIONAL FINANCE PLANS FOR THE YEAR 1980

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV61	2811	4058	1823	1576	2275	1022	1533	2273	1021
RC26	2124	4183	2242	1191	2345	1257	1161	2342	1258
RC68	1503	1731	2173	843	971	1218	821	970	1219
DIST4910	2161	2570	2188	1212	1441	1227	1249	1439	1227
RC23	1882	1619	2156	1055	907	1209	1028	907	1209
RC111	1678	1263	2164	941	708	1213	917	707	1214
DIV51	2046	1823	2114	1147	1022	1185	1116	1021	1186
RC73	1780	1572	2041	998	881	1144	973	880	1144
RC96	1853	1916	2114	1039	1074	1185	1013	1073	1186
RC51	1850	1692	2013	1037	949	1129	1011	948	1129
RC56	1521	1795	2190	853	1006	1228	831	1005	1229
RC97	1694	1386	2074	950	777	1163	926	776	1163
RC37	1615	1405	2136	905	788	1198	882	787	1198
RC18	1605	1971	2133	900	1105	1196	877	1104	1196
RC36	1671	2494	2157	937	1398	1209	913	1397	1210

TABLE G.1 (continued)

JURISDICTION	ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
RC105	1827	2101	2014	1024	1178	1129	998	1177	1129
RC35	1720	2191	2128	964	1229	1193	940	1227	1194
RC31	1546	1448	1919	867	812	1076	845	811	1075
RC65	1803	1617	2014	1011	906	1129	985	905	1129
RC82	1902	2025	2008	1066	1135	1126	1039	1134	1126
RC88	1670	1916	2140	936	1074	1200	913	1073	1201
CON69	1871	2127	2009	1049	1192	1127	815	1191	1127
RC30	2019	1817	2127	1132	1018	1193	1103	1017	1193
RC110	1611	1253	1953	903	702	1095	880	702	1095
RC43	1740	1916	2064	976	1074	1157	951	1073	1158
RC50	1759	1578	2140	986	885	1200	961	884	1201
RC54	1592	1624	2030	893	911	1138	870	910	1138
RC49	2069	1389	1765	1160	779	990	1131	778	989
DIV52	2169	3134	2118	1216	1757	1187	1183	1755	1188
RC15	1701	1509	1878	954	846	1053	929	845	1052
CTY12	1982	1699	1898	1111	953	1064	1109	952	1064
DIV63	1741	2012	1882	976	1128	1055	950	1127	1055
CTY11	1849	1823	2010	1037	1022	1127	1034	1021	1127

TABLE G.1 (continued)

JURISDICTION	ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CP35	1718	1316	1887	963	738	1058	748	737	1058
RC79	1689	1572	1830	947	881	1026	923	880	1025
DIST4972	1564	1800	1978	877	1009	1109	904	1008	1109
DIV48	1828	2568	2042	1025	1440	1145	997	1438	1145
RC84	1891	1100	2086	1060	617	1169	1033	616	1170
CTY19	2284	1963	1944	1280	1101	1090	1278	1099	1090
DIST1738	1775	1383	1928	995	775	1081	1026	774	1080
RC21	1642	1639	1819	921	919	1020	897	918	1019
RC60	1644	1729	1933	922	969	1084	898	968	1083
RC17	1662	1529	1770	932	857	992	908	856	991
RC95	2055	2416	1529	1152	1354	857	1123	1353	855
DIST647	1823	1605	2027	1022	900	1136	1053	899	1137
DIST2228	1639	1426	1817	919	800	1018	947	799	1018
DIST2092	1630	1901	1913	914	1066	1072	942	1065	1072
DIV47	2211	2572	1942	1240	1442	1089	1206	1441	1089
RC28	1716	2046	1987	962	1147	1114	938	1146	1114
DIST1475	1626	1856	1935	912	1041	1085	940	1040	1085
DIV12	1669	1809	1897	936	1014	1064	910	1013	1063

TABLE G.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIST3	1707	1563	1859	957	876	1042	986	876	1042
DIV37	1961	2070	1932	1099	1161	1083	1070	1159	1083
RC94	1704	1010	2018	955	566	1131	931	566	1131
PS6	1750	1621	1877	981	909	1053	762	908	1052
CTY3	1804	2526	1885	1011	1416	1057	1009	1415	1056
RC104	1644	1575	1778	922	883	997	898	882	996
CTY13	1948	1886	1865	1092	1057	1046	1090	1056	1045
CTY28	1797	1243	1864	1007	697	1045	1005	696	1044
DIV50	1998	2191	1975	1120	1229	1107	1090	1227	1107
CTY26	1861	1710	1883	1043	959	1056	1041	958	1055
DIV2	1854	1509	1944	1039	846	1090	1011	845	1090
DIV6	1860	2076	1904	1043	1164	1067	1014	1163	1067
DIV10	1912	1916	1908	1072	1074	1070	1043	1073	1069
CTY10	1884	1637	1818	1056	918	1019	1054	917	1018
DIV32	1742	1799	1870	977	1009	1048	950	1008	1048
CTY30	1844	2127	1857	1034	1193	1041	1031	1191	1040
CTY9	1867	1760	1881	1047	987	1054	1044	986	1054
CTY25	1598	1527	1792	896	856	1005	894	855	1004

TABLE G.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CTY23	1649	1572	1799	924	881	1009	922	880	1008
DIST2283	1774	1885	1817	995	1057	1019	1025	1056	1018
CTY31	1619	1572	1754	908	881	983	906	880	982
RC25	1733	1634	1806	972	916	1013	947	915	1012
DIV24	1790	1922	1701	1004	1077	954	976	1076	953
CTY14	1687	1634	1758	946	916	985	944	915	984
CTY22	1900	1917	1862	1065	1075	1044	1063	1073	1043
DIV62	1620	1690	1897	908	947	1064	884	946	1063
CTY29	1826	1394	1869	1024	781	1048	1021	780	1047
DIST264	1581	1526	1827	886	855	1024	914	854	1023
PS5	1513	1422	1836	848	797	1029	659	796	1029
CTY5	1826	1939	1910	1024	1087	1071	1021	1086	1071
DIST5258	1590	2035	1863	891	1141	1044	919	1140	1044
DIV28	1797	1792	1830	1007	1004	1026	980	1003	1025
DIST76	1490	1622	1716	835	909	962	861	908	961
CTY21	1973	2127	1816	1106	1192	1018	1104	1191	1017
CTY4	1839	2763	1782	1031	1549	999	1029	1547	998
DIST2357	1648	2042	1777	924	1145	996	952	1143	995

TABLE G.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV38	1657	1697	1740	929	952	976	904	951	974
DIV41	1607	1724	1660	901	966	931	876	965	929
CTY20	1632	1610	1586	915	903	889	913	902	887
CTY17	1663	1531	1774	932	858	995	930	857	994
RC1	1558	1439	1761	873	807	988	851	806	987
DIV15	1701	1694	1903	954	950	1067	928	949	1067
DIST1315	1511	1666	1717	847	934	963	873	933	961
CTY24	1942	2071	1825	1089	1161	1023	1086	1160	1023
RC9	1488	1717	1753	834	962	983	813	961	982
DIST5109	1736	1994	1439	973	1118	807	1003	1117	804
CTY27	1739	1864	1755	975	1045	984	973	1044	983
DIST104	1558	1634	1676	873	916	939	900	915	938
CTY1	1860	1729	1870	1043	969	1048	1040	968	1048
DIST2833	1785	2221	1425	1001	1245	799	1031	1244	796
RC128	1792	1284	1653	1005	720	927	979	719	925
DIST51	1489	1619	1565	835	908	878	860	907	876
DIV33	1998	2404	1689	1120	1348	947	1090	1347	946
CON38	1675	1217	1845	939	682	1035	729	682	1034

TABLE G.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CTY18	1840	2161	1729	1032	1212	970	1029	1210	968
DIV9	1883	1823	1684	1056	1022	944	1027	1021	943
DIV60	1822	1886	1598	1021	1057	896	994	1056	894
CTY8	1980	1930	1715	1110	1082	962	1108	1081	960
DIV29	1701	1873	1657	954	1050	929	928	1049	928
CTY7	1985	1951	1960	1113	1094	1099	1110	1093	1099
RC32	1782	2221	1425	999	1245	799	974	1244	797
CTY16	1674	1194	1517	938	670	851	936	669	849
RC16	1411	1687	1675	791	946	939	771	945	938
RC7	1617	1387	1528	907	778	857	884	777	855
CTY2	2000	1616	1529	1121	906	857	1119	905	855
DIV16	1953	2081	1697	1095	1167	951	1065	1165	950
CTY6	2129	1832	1621	1194	1027	909	1191	1026	907
DIV30	2115	2088	1587	1186	1170	890	1154	1169	888
DIV54	1837	2127	1733	1030	1192	971	1002	1191	970
DIST19	1343	1440	1426	753	807	799	776	806	797
DIST7	1573	1387	1295	882	777	726	909	777	723
DIST1699	1978	1155	-577	1109	648	-323	1143	647	-334

TABLE G.1 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A PROVINCIAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV8	2323	1578	1399	1302	885	784	1267	884	782
CON8	1950	1289	1398	1093	723	784	849	722	781
DIST3063	1730	1292	1012	970	725	568	1000	724	563
DIV4	2526	2244	1137	1416	1258	638	1378	1257	634
DIV1	2947	1666	605	1652	934	339	1607	933	333
DIST102	1673	1198	-166	938	672	-92	967	671	-102
DIST4233	2016	242	-1147	1130	136	-643	1165	136	-657

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

+ BASE YEAR IS 1975

++ LOCAL MILL RATE FOR EACH JURISDICTION UNDER POWER EQUALIZING IS THE SAME AS UNDER THE EXISTING ALLOCATION PLAN

TABLE G.2

PROVINCIAL APPROPRIATIONS PER ELIGIBLE PUPIL UNDER ALTERNATIVE EDUCATIONAL FINANCE PLANS FOR THE YEAR 1980

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV61	2717	3466	1653	1523	1943	927	1482	1938	926
RC26	2069	3572	2216	1160	2003	1242	1131	1998	1243
RC68	1454	1478	2124	815	829	1191	794	827	1191
DIST4910	2063	2195	2144	1157	1230	1202	1192	1227	1203
RC23	1834	1382	2100	1028	775	1177	1002	773	1178
RC111	1625	1078	2111	911	605	1184	888	603	1184
DIV51	1931	1557	2044	1083	873	1146	1053	871	1147
RC73	1714	1342	1946	961	752	1091	937	750	1091
RC96	1753	1636	2044	983	917	1146	958	915	1146
RC51	1707	1445	1909	957	810	1070	933	808	1070
RC56	1473	1533	2147	826	859	1204	805	857	1204
RC97	1624	1184	1990	910	664	1116	887	662	1116
RC37	1567	1200	2074	879	673	1163	856	671	1163
RC18	1558	1683	2070	873	944	1160	851	941	1161
RC36	1624	2130	2101	910	1194	1178	887	1191	1179

TABLE G.2 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
RC105	1698	1795	1910	952	1006	1071	928	1004	1071
RC35	1654	1871	2063	927	1049	1157	904	1046	1157
RC31	1416	1236	1782	794	693	999	774	691	998
RC65	1695	1381	1910	950	774	1071	926	772	1071
RC82	1815	1729	1902	1018	969	1066	992	967	1066
RC88	1621	1636	2080	909	917	1166	886	915	1167
CON69	1747	1816	1904	979	1018	1067	761	1016	1067
RC30	1978	1551	2062	1109	870	1156	1081	868	1157
RC110	1479	1070	1828	829	600	1025	808	598	1025
RC43	1640	1636	1977	919	917	1109	896	915	1109
RC50	1696	1348	2080	951	756	1166	927	754	1166
RC54	1483	1387	1932	831	778	1083	810	776	1083
RC49	1887	1186	1575	1058	665	883	1031	663	882
DIV52	2051	2677	2049	1150	1501	1149	1119	1497	1149
RC15	1553	1288	1727	871	722	968	849	720	968
CTY12	1799	1451	1754	1009	813	983	1006	811	983
DIV63	1570	1718	1732	880	963	971	856	961	971
CTY11	1757	1557	1905	985	873	1068	983	871	1068

TABLE G.2 (continued)

JURISDICTION	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CP35	1610	1124	1740	903	630	975	701	629	975
RC79	1542	1342	1662	864	752	932	843	750	931
DIST4972	1475	1537	1861	827	862	1043	852	860	1043
DIV48	1717	2193	1947	963	1230	1092	936	1227	1092
RC84	1791	939	2007	1004	527	1125	979	525	1125
CTY19	2190	1676	1816	1228	940	1018	1225	938	1018
DIST1738	1645	1181	1794	922	662	1006	951	660	1005
RC21	1468	1400	1647	823	785	924	802	783	923
RC60	1510	1476	1801	847	828	1010	825	826	1009
RC17	1485	1306	1582	833	732	887	811	730	886
RC95	1800	2063	1258	1009	1157	705	984	1154	703
DIST647	1016	1371	1927	570	769	1080	587	767	1080
DIST2228	1460	1218	1644	819	683	922	844	681	921
DIST2092	1505	1623	1773	844	910	994	870	908	994
DIV47	2090	2197	1813	1172	1232	1017	1140	1228	1016
RC28	1599	1747	1874	896	980	1051	874	977	1051
DIST1475	1336	1585	1804	749	889	1011	772	886	1011
DIV12	1479	1544	1752	829	866	982	807	864	982

TABLE G.2 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIST3	1642	1335	1701	921	748	954	949	747	953
DIV37	1836	1768	1800	1029	991	1009	1001	989	1009
RC94	1599	863	1915	896	484	1073	874	482	1074
PS6	1687	1384	1726	946	776	968	734	774	967
CTY3	1655	2157	1736	928	1209	973	926	1206	973
RC104	1408	1345	1592	789	754	893	769	752	892
CTY13	1780	1610	1709	998	903	958	996	901	958
CTY28	1599	1062	1708	896	595	957	894	594	957
DIV50	1879	1871	1857	1053	1049	1041	1025	1046	1041
CTY26	1716	1460	1734	962	819	972	960	817	971
DIV2	1758	1288	1816	986	722	1018	959	720	1018
DIV6	1722	1773	1762	965	994	988	939	992	987
DIV10	1775	1636	1767	995	917	991	968	915	990
CTY10	1708	1398	1646	958	784	923	955	782	922
DIV32	1576	1536	1716	884	861	962	860	859	961
CTY30	1721	1817	1698	965	1018	952	963	1016	952
CTY9	1715	1503	1731	961	843	970	959	841	970
CTY25	1403	1304	1612	787	731	903	785	729	903

TABLE G.2 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CTY23	1494	1342	1621	838	752	909	836	750	908
DIST2283	1624	1610	1645	910	903	922	938	900	921
CTY31	1385	1342	1561	776	752	875	775	750	874
RC25	1582	1396	1631	887	782	914	864	781	913
DIV24	1543	1641	1489	865	920	835	842	918	834
CTY14	1483	1396	1565	831	782	878	830	781	876
CTY22	1742	1637	1705	977	918	956	974	915	955
DIV62	1490	1443	1753	835	809	983	813	807	982
CTY29	1681	1190	1715	942	667	962	940	666	961
DIST264	1416	1303	1658	794	730	930	818	729	929
PS5	1340	1214	1670	751	681	936	583	679	936
CTY5	1689	1656	1770	947	928	992	945	926	992
DIST5258	1398	1738	1706	784	975	957	808	972	956
DIV28	1669	1530	1662	936	858	932	910	856	931
DIST76	1279	1385	1509	717	776	846	739	775	845
CTY21	1774	1816	1644	995	1018	922	992	1016	921
CTY4	1560	2359	1597	875	1323	896	873	1319	895
DIST2357	1456	1744	1591	816	978	892	841	975	891

TABLE 6.2 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV38	1484	1449	1541	832	813	864	809	811	863
DIV41	1367	1472	1434	766	825	804	746	823	802
CTY20	1320	1375	1334	740	771	748	738	769	746
CTY17	1405	1307	1588	788	733	890	786	731	889
RC1	1392	1229	1570	780	689	880	761	687	879
DIV15	1420	1447	1761	796	811	987	774	809	987
DIST1315	1302	1423	1511	730	798	847	752	796	846
CTY24	1811	1768	1656	1015	991	928	1013	989	928
RC9	1316	1466	1558	738	822	874	719	820	873
DIST5109	1240	1703	1137	695	955	637	717	952	635
CTY27	1535	1592	1562	861	892	876	859	890	875
DIST104	1350	1396	1455	757	782	816	780	781	814
CTY1	1665	1476	1716	933	828	962	931	826	962
DIST2833	1290	1897	1118	723	1063	627	745	1061	624
RC128	1607	1097	1424	901	615	798	878	613	797
DIST51	1260	1383	1307	706	775	733	728	773	731
DIV33	1697	2053	1473	951	1151	826	926	1148	824
CON38	1523	1039	1683	854	583	944	663	581	943

TABLE G.2 (continued)

ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX

JURISDICTION	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
CTY18	1565	1846	1527	877	1035	856	875	1032	855
DIV9	1656	1557	1467	928	873	822	903	871	821
DIV60	1527	1610	1351	856	903	757	833	901	756
CTY8	1834	1648	1508	1028	924	845	1026	922	844
DIV29	1399	1600	1430	784	897	802	763	895	800
CTY7	1735	1666	1837	973	934	1030	971	932	1030
RC32	1293	1897	1118	725	1063	627	707	1061	624
CTY16	1288	1020	1242	722	572	696	720	570	694
RC16	674	1441	1454	378	808	815	368	806	814
RC7	1360	1185	1256	762	664	704	743	663	702
CTY2	1816	1380	1258	1018	773	705	1016	772	703
DIV16	1690	1777	1483	947	996	831	922	994	830
CTY6	1869	1564	1381	1048	877	774	1045	875	773
DIV30	1952	1783	1336	1094	999	749	1065	997	747
DIV54	1465	1816	1531	821	1018	859	799	1016	857
DIST19	1077	1229	1119	604	689	627	622	687	625
DIST7	1241	1184	943	696	664	529	717	662	525
DIST1699	248	987	-1575	139	553	-882	143	552	-894

TABLE G.2 (continued)

	ASSUMPTION: MANDATORY FOUNDATION LEVY A LOCAL TAX								
	UNADJUSTED			ADJUSTED BY A PROVINCIAL PRICE INDEX+			ADJUSTED BY JURISDICTIONAL PRICE INDEXES+		
JURISDICTION	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE	EXISTING	POWER++	PERCENTAGE
DIV8	1957	1348	1083	1097	756	607	1067	754	604
CON8	1542	1101	1081	864	617	606	671	616	603
DIST3063	1066	1104	563	598	619	316	616	617	311
DIV4	1899	1916	731	1065	1074	410	1036	1072	406
DIV1	2199	1423	15	1233	798	9	1199	796	2
DIST102	573	1023	-1021	321	574	-572	331	572	-582
DIST4233	636	207	-2341	357	116	-1312	368	116	-1326

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

+ BASE YEAR IS 1975

++ LOCAL MILL RATE FOR EACH JURISDICTION UNDER POWER EQUALIZING IS THE SAME AS UNDER THE EXISTING ALLOCATION PLAN

APPENDIX H

LISTING OF DATA BY JURISDICTION FOR THE YEAR 1980

TABLE H.1

LISTING OF DATA BY JURISDICTION FOR THE YEAR 1980
(DOLLARS PER ELIGIBLE PUPIL)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF) REG. LEVY++ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF) TOTAL $	SUPPLEMENTARY REQUISITION $	SUPPLEMENTARY REQUISITION MILL RATE	OPERATING EXPENDITURE+++ $
DIV61	1387	19857	896	94	1915	1282	64.56	6492
RC26	108	3015	683	55	1441	201	66.54	2581
RC68	122	5767	354	49	1149	159	27.54	1632
DIST4910	116	5178	314	98	1847	212	40.88	2236
RC23	126	6474	433	48	1449	167	25.75	1982
RC111	371	6138	209	53	1469	123	20.09	1879
DIV51	2089	8146	305	115	1741	236	29.00	2440
RC73	251	11092	371	66	1409	277	25.00	1816
RC96	47	8166	404	100	1449	249	30.48	2190
RC51	90	12209	520	143	1330	329	26.92	2221
RC56	418	5083	184	48	1337	433	28.55	1737
RC97	324	9763	195	70	1499	215	22.05	2102
RC37	192	7257	250	48	1365	162	22.35	1834
RC18	326	7388	183	47	1422	232	31.35	2077
RC36	102	6439	386	47	1285	256	39.68	1702

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF)		SUPPLEMENTARY REQUISITION		OPERATING EXPENDITURE+++ $
				REG. LEVY++ $	TOTAL $	$	MILL RATE	
RC105	2379	12170	214	129	1613	407	33.43	1907
RC35	386	7586	259	66	1461	264	34.86	1938
RC31	245	16007	241	130	1305	369	23.03	1892
RC65	214	12173	287	108	1516	313	25.72	2071
RC82	170	12418	391	87	1511	400	32.21	1998
RC88	212	7091	326	49	1344	216	30.48	1816
CON69	395	12357	228	124	1643	418	33.83	2538
RC30	178	7620	504	41	1515	215	28.90	3427
RC110	412	14625	142	132	1469	292	19.93	1806
RC43	680	10150	207	100	1533	309	30.48	1921
RC50	81	7092	417	63	1342	178	25.11	2132
RC54	550	11522	141	109	1451	100	25.84	1861
RC49	39	22188	728	182	1341	490	22.10	2395
DIV52	2084	7997	508	118	1661	399	49.86	2579
RC15	232	17640	379	148	1322	423	24.00	2089
CTY12	2078	16842	156	183	1826	455	27.03	2374
DIV63	1409	17485	168	171	1573	560	32.00	1939
CTY11	2358	12323	184	92	1665	357	29.00	2190

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF)		SUPPLEMENTARY REQUISITION		OPERATING EXPENDITURE+++ $
				REG. LEVY++ $	TOTAL $	$	MILL RATE	
CP35	1074	17267	115	108	1603	361	20.94	1827
RC79	137	19594	351	147	1338	490	25.00	2294
DIST4972	1127	13635	87	89	1477	390	28.64	1791
DIV48	3307	11056	161	111	1667	452	40.86	2246
RC84	146	9278	389	100	1502	162	17.50	4167
CTY19	1329	14974	370	94	1914	468	31.23	3009
DIST1738	389	15650	233	130	1542	344	22.00	2078
RC21	1900	20029	129	174	1513	522	26.08	1813
RC60	466	15437	283	134	1361	425	27.50	1908
RC17	1470	21987	109	177	1553	535	24.32	2003
RC95	69	31683	591	255	1464	1217	38.43	5974
DIST647	214	11655	297	807	1526	298	25.54	1923
DIST2228	723	20114	196	179	1443	456	22.69	2473
DIST2092	2158	16252	89	125	1541	492	30.24	1926
DIV47	1530	15056	248	121	1963	616	40.92	2446
RC28	1320	13241	177	117	1539	431	32.55	1922
DIST1475	1317	15353	88	290	1538	453	29.53	2158
DIV12	5310	16881	83	190	1586	486	28.77	2112

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF)		SUPPLEMENTARY REQUISITION		OPERATING EXPENDITURE+++ $
				REG. LEVY++ $	TOTAL $	$	MILL RATE	
DIST3	2632	18410	141	65	1566	458	24.87	1841
DIV37	2328	15459	183	125	1778	509	32.93	2339
RC94	532	12024	179	105	1525	193	16.07	1476
PS6	4718	17670	146	63	1604	455	25.78	1908
CTY3	2741	17375	143	149	1661	698	40.18	2531
RC104	714	21681	117	236	1527	543	25.05	1822
CTY13	970	18171	176	168	1772	545	30.00	2505
CTY28	3343	18219	59	198	1738	360	19.78	2125
DIV50	1518	13741	206	119	1792	479	34.86	2503
CTY26	2812	17441	213	145	1648	474	27.20	2247
DIV2	2109	14983	202	96	1652	360	24.00	2653
DIV6	2385	16603	198	138	1662	548	33.03	2255
DIV10	2667	16447	169	137	1743	501	30.48	2438
CTY10	1995	20076	138	176	1746	523	26.04	2532
DIV32	1613	17973	94	166	1648	514	28.62	2648
CTY30	1730	18497	95	123	1749	626	33.84	2170
CTY9	1869	17529	91	152	1776	491	28.00	2190
CTY25	6352	21098	40	195	1558	512	24.29	2037

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF) REG. LEVY++ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF) TOTAL $	SUPPLEMENTARY REQUISITION $	SUPPLEMENTARY REQUISITION MILL RATE	OPERATING EXPENDITURE+++ $
CTY23	4824	20809	67	155	1582	520	25.00	1973
DIST2283	683	20110	232	150	1542	603	29.99	2005
CTY31	9480	22624	15	234	1604	566	25.00	2077
RC25	241	20526	284	151	1449	534	26.00	1936
DIV24	4242	24751	32	247	1758	757	30.57	2189
CTY14	3565	22485	77	204	1610	585	26.00	2220
CTY22	1992	18303	181	158	1719	558	30.49	2439
DIV62	1381	16878	49	130	1571	454	26.88	2221
CTY29	2001	17995	103	145	1723	399	22.17	2220
DIST264	1789	19703	43	165	1538	478	24.27	1927
PS5	411	19341	163	173	1350	438	22.62	2355
CTY5	1751	16354	174	137	1652	505	30.85	2026
DIST5258	1128	18267	56	192	1534	591	32.38	1756
DIV28	2667	19587	104	128	1693	558	28.50	2436
DIST76	5710	24168	36	211	1454	624	25.80	1989
CTY21	1068	20130	187	199	1786	681	33.83	2547
CTY4	1530	21518	82	279	1757	946	43.95	2641
DIST2357	3447	21712	111	192	1537	705	32.48	2212

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF)		SUPPLEMENTARY REQUISITION		OPERATING EXPENDITURE+++ $
				REG. LEVY++ $	TOTAL $	$	MILL RATE	
DIV38	4276	23196	39	173	1618	626	27.00	2018
DIV41	6726	26422	0	240	1607	724	27.42	2004
CTY20	12532	29392	22	312	1610	753	25.62	2152
CTY17	4102	21811	65	258	1598	531	24.35	2077
RC1	23715	22336	74	166	1484	511	22.89	1835
DIV15	3037	16629	8	281	1693	448	26.95	1886
DIST1315	1941	24120	33	209	1478	639	26.50	2187
CTY24	2118	19765	157	131	1785	651	32.94	2463
RC9	2137	22687	23	172	1465	619	27.31	2060
DIST5109	448	35303	85	496	1651	1120	31.72	2247
CTY27	1867	22578	62	204	1677	669	29.65	2428
DIST104	6315	25785	41	208	1517	670	26.00	2176
CTY1	3200	17959	161	195	1699	494	27.50	2264
DIST2833	4669	35879	134	495	1651	1268	35.33	1933
RC128	282	26710	67	185	1725	546	20.43	1461
DIST51	7387	30221	5	229	1484	778	25.76	2053
DIV33	775	25247	167	301	1831	966	38.25	2854
CON38	45	18956	270	152	1405	367	19.36	1925

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF)		SUPPLEMENTARY REQUISITION		OPERATING EXPENDITURE+++ $
				REG. LEVY++ $	TOTAL $	$	MILL RATE	
CTY18	985	23623	76	275	1764	812	34.38	2527
DIV9	888	25437	55	227	1828	738	29.00	2524
DIV60	1544	28894	57	295	1765	867	30.00	2528
CTY8	1082	24202	111	146	1869	743	30.70	2473
DIV29	1220	26524	38	302	1663	790	29.80	2491
CTY7	877	14342	191	250	1794	445	31.04	2318
RC32	2032	35859	131	489	1651	1267	35.33	2158
CTY16	2028	32163	58	386	1616	611	19.00	2439
RC16	275	25811	79	737	1332	693	26.84	1960
RC7	26180	31735	15	257	1602	700	22.07	2178
CTY2	1142	31677	108	184	1892	814	25.70	2999
DIV16	559	24943	128	263	1825	826	33.10	2678
CTY6	895	27991	143	260	1986	816	29.14	2883
DIV30	544	29349	222	163	1893	975	33.21	2955
DIV54	1837	23496	35	372	1802	795	33.83	2265
DIST19	76407	35843	15	266	1328	821	22.90	2013
DIST7	60119	41109	25	332	1548	907	22.06	2389
DIST1699	57	116471	284	1730	1694	2141	18.38	10348

TABLE H.1 (continued)

JURISDICTION	ENROLMENT	EQUALIZED ASSESSMENT $	CATEGORICAL GRANTS+ $	SCHOOL FOUNDATION PROGRAM FUND(SFPF) REG. LEVY++ $	TOTAL $	SUPPLEMENTARY REQUISITION $	MILL RATE	OPERATING EXPENDITURE+++ $
DIV8	683	36925	143	366	2180	927	25.11	3427
CON8	62	36966	237	408	1713	758	20.51	2589
DIST3063	503	52477	103	664	1627	1079	20.56	2621
DIV4	797	47444	109	627	2417	1694	35.70	4196
DIV1	133	68865	331	748	2616	1825	26.50	4664
DIST102	408	99906	199	1100	1474	1904	19.06	N/A
DIST4233	17	139407	618	1380	1398	537	3.85	3680

DIV=SCHOOL DIVISION; CTY=COUNTY; DIST=PUBLIC SCHOOL DISTRICT; RC=ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT; CON=CONSOLIDATED SCHOOL DISTRICT; PS=PROTESTANT SEPARATE SCHOOL DISTRICT; CP=ROMAN CATHOLIC PUBLIC SCHOOL DISTRICT

N/A=DATA NOT AVAILABLE

+ GRANTS=SUPPLEMENTARY REQUISITION EQUALIZATION GRANT + DECLINING ENROLMENT GRANT + SMALL SCHOOL ASSISTANCE GRANT + SMALL SCHOOL JURISDICTION GRANT + CORPORATE ASSESSMENT GRANT + LOCATION ALLOWANCE GRANT + PRIVATE SCHOOL OPENING GRANT + INCREMENTAL GRANT

++ MANDATORY SCHOOL FOUNDATION LEVY=21.5 MILLS

+++ OPERATING EXPENDITURE=INSTRUCTION (ELEMENTARY + JUNIOR HIGH + SENIOR HIGH) + OPERATION AND MAINTENANCE + ADMINISTRATION + TRANSPORTATION